SUBSTANCE OF A

Clinical Lecture

ON

TWO CASES OF ANEURYSM, AXILLARY AND POPLITEAL: TREATMENT BY DIGITAL COMPRESSION AND LIGATURE.

Delivered at Westminster Hospital on Oct. 2nd, 1890,

BY GEORGE COWELL, F.R.C.S., &c.
SENIOR SURGEON TO THE HOSPITAL.

GENTLEMEN,—Cases of aneurysm are always interesting and instructive, and the two cases that I put before you to-day afford in both these directions much material for careful consideration and some points of comparison and contrast, always an addition to the value of a clinical lecture. The first is a case of right axillary aneurysm in a man of fifty-three years, with degenerated arteries. And although the matter was somewhat obscure, such previous history as could be obtained, together with the absence of pulsation in the left radial artery, led me to suppose that the patient had previously been the subject of a left axillary or subclavian aneurysm which had cured itself spontaneously. In the present aneurysm on the right side, the treatment by digital compression of the subclavian failed, and the artery was ligatured in the third part of its course. The operation was followed by considerable relief to the patient and some diminution in the size of the aneurysm, although there was a speedy return of pulsation. The patient was readmitted to the hospital seventeen months after his discharge with a secondary aneurysm of the right subclavian immediately above the seat of the ligature. No further operation was attempted, but the patient improved somewhat by treatment and rest in bed and was again discharged. He continued to show himself occasionally, and sixteen months later was again admitted, but with the condition entirely changed. He was suffering from complete left hemiplegia, and both the aneurysms, axillary and subclavian, firmly consolidated, and without the faintest remains of pulsation. In the hospital the patient uninterruptedly improved. First sensation and then muscular movements returned, and he was again discharged. There was marked feebleness of the left side, but no return of pulsation in either aneurysm. It is now more than a year and a half since he was discharged; but the other day some of you saw this patient with me when he came to show himself and prefer some impossible request. His left side had completely recovered, and there was no sign of pulsation or tenderness in the old aneurysms. The man's brain had, however, given way, and he is gradually becoming imbecile. The second case was one of popliteal aneurism in a man thirty-three years of age, with apparently healthy arteries. Digital compression of the femoral was only partially successful, and both flexion and Esmarch's bandage were tried, but they too failed to complete the cure, and the femoral artery was tied with perfect success. Now let us read the notes of these cases, and consider them more in detail.

G. E——, aged fifty-three, married, a commercial traveller, was admitted into St. Matthew ward on Dec. 31st, 1885. His appearance is fat and plethoric, but not markedly so. There is no arcus senilis. His family history is good: father and mother healthy, mother still living. He is married and has six children. For his previous history, he tells us that he broke his leg thirty years ago, was struck by lightning fifteen years later, and had a carbuncle on the left shoulder some two years since. There is neither history nor signs of syphilis. The immediate history of the case is that the patient had a violent fall on Sept. 4th, and was much shaken. Six weeks ago he noticed some pain in the right axilla, and felt a throbbing there; this was followed by some numbness and loss of power in the hand and forearm, attended by an aching pain in the pectoral region and in the back of the arm. These symptoms made him seek admission to the hospital. When first seen by me his condition was as follows. There was dorsal decubitus; he could not lie on the right side owing to the increased sense of pulsation thus induced. The apex of the axilla was filled with a rounded tumour, and marked pulsation was felt in the axilla, and visible below the acromial end of the clavicle. The left pupil was more dilated than the right, but the patient said that it had been so for several years. The heart sounds were normal. The right radial pulse too was normal (about 68), but the left radial pulse was scarcely perceptible. No distinct history to account for this could be obtained. There was no sign of enlargement of the axillary or subclavian arteries on that side, but the arm had been weak some few years since, and it is possible that the patient may have been the subject of an aneurysm which had been overlooked, and which had speedily undergone a spontaneous cure. It was difficult otherwise to account for the almost absence of pulsation in the left radial. It was determined to try the effect of treatment by compression of the subclavian against the first rib. The house surgeon and dressers, with one or two other senior students, entered upon a course of digital compression, to be applied for about three hours each evening if the patient could bear it. Small doses of iodide of potassium thrice daily were prescribed, and a hypodermic injection containing one-third of a grain of hydrochlorate of morphia was administered an hour before the compression was commenced. The arm, too, was enveloped in a flannel bandage. The digital compression was maintained for three hours the first evening, Jan. 7th, but for a shorter time on each of the succeeding evenings, as it was found necessary to desist on account of the pain at the seat of pressure. This pain continued for some days afterwards, and on the 19th the temperature rose to 102°, and the patient had a slight rigor. On the 20th the temperature varied from 97° to 103°, and there was another rigor. The symptoms and pain subsided after this, but the aneurysm and the symptoms it produced were unchanged, and it was decided to ligature the subclavian artery in the third part of its course. The operation was performed on Jan. 26th, 1886. The patient was placed under the influence of ether, and the usual method of operation was adopted. On dividing the deep fascia some very troublesome venous hæmorrhage occurred, which added much to the difficulty of securing the vessel, and the anæsthetic was badly borne. The bleeding was very profuse, and the patient became much collapsed. After the ligature, which was of silk, was applied, the wound was plugged, and the judicious administration of some brandy, both subcutaneously and by the mouth, speedily restored the patient. The pulsation in the aneurysm and in the radial artery was diminished, but not stopped.—27th: The pads were not disturbed. The patient has had some sleep, and he is quite easy. The temperature has not been above 99°. The pulsation is about the same.—28th: The pads and some clot were removed from the wound. There was no bleeding, and pads were placed on either side of the wound to bring the edges together. The patient is weak, but fairly well. The temperature has varied from 98·2° to 99·4°, the pulse being 100. The pulsation in the aneurysm is less, and the tumour less pointed. The diet has been milk and beef-tea.—Feb. 1st: The patient was flushed and the tongue dry, and the temperature had advanced to 101·6°, the wound looking somewhat unhealthy, probably from some want of care in the dressing. The tumour, however, is decidedly smaller, but there is still some numbness in the fourth and fifth fingers and the outer side of the right hand. At night the temperature was 101·4°, and the tongue was moister. The patient gradually improved, and slept well; the highest temperature in the night of the 2nd was 99·6°, and the wound is healing. The tumour feels firmer, and the numbness is less, but there is a tendency to flexion of the fingers, and there appears to be some difficulty in extending them completely.—18th: The patient is still thin and weak, but the pulsation is less felt, and the tumour is smaller and harder. He now eats a mutton chop daily. The wound is nearly healed. Six weeks later the patient was sent to a convalescent home. There was still some pulsation perceptible in the aneurysm, but it is reduced in size, and the patient is much more comfortable. He wears no bandage, but carries the arm in a sling.

In August, 1887, some sixteen months after the last note, the patient came to show himself on account of the formation of a pulsating tumour in the neck. He was advised to come into the hospital, and a month later, on Sept. 19th, he was readmitted. The notes show that there was still some

pulsation in the axillary aneurysm, which had not enlarged, and perhaps even was somewhat smaller; but there was another aneurysm above the clavicle. The patient had noticed this for some months, and it had been gradually getting larger and more prominent. There had been some pain, and the neck was occasionally very stiff. On some days there was severe headache, limited to the right side of the head. The patient stated also that during his absence from London he had four times suddenly lost power in the right leg. On these occasions he had fallen down, the weakness in the leg lasting about ten minutes, accompanied by a "queer feeling" in the head.

There is no doubt that the patient has developed an aneurysm of the subclavian artery, just above the point of ligature. It forms a large pulsating tumour, somewhat tense and tender, lying to the outer side of the sterno-mastoid muscle. The inequality of the pupils was the same as was observed before, the right pupil being smaller than the left and the vision in that eye being somewhat defective. The radial and ulnar pulses in the right arm are apparently normal, but, as before, the left radial pulse is only just perceptible and the left ulnar artery cannot be felt at all. The carotids pulsate with equal force. The only treatment adopted was rest in bed, the internal administration of iodide of potassium, and a soft, dry, elastic sponge applied over the subclavian aneurysm to exercise a gentle compression. It was felt that no further operation was justifiable in consequence of the degenerated condition of the patient's arteries. This treatment by rest lessened the amount of the pulsation and the tenderness and stiffness diminished, and a few weeks later the patient again left the hospital, coming, however, to show himself at intervals of a few weeks.

Some fourteen months afterwards, on Jan. 14th, 1889, this patient was brought to the hospital in consequence of a sudden attack of left hemiplegia. I happened to be at the hospital when he was carried in and at once recognised him and gave instructions for his admission into Northumberland ward. He was sensible, but somewhat dull and stupid, and stated that on the day before on getting out of bed he found that he "could not stand, his left leg giving way under him," and that he felt very giddy. On removal to bed in the ward he lay helplessly on his back, and it was found that he had complete loss of sensation and paralysis of the left arm and leg. There is some wasting of the muscles of the latter, but not of the arm. There is incontinence of urine, no control over the anal sphincters, and in masticating he has bitten the inside of his cheek. The right pupil is still contracted, and the left is somewhat dilated. He has had headache, but it is not continuous, and is mostly felt at the back of the head. On examination of the aneurysms, it was found that both were smaller than when they were last seen, and that both had completely consolidated, no pulsation being felt or audible to the stethoscope in either. The patient remained in the hospital for upwards of eight weeks, and gradually recovered, first sensation, and then movement, first in the arm, and then in the leg. After the first few weeks passive movements were adopted daily, and the patient when he was discharged could walk with crutches. There was no return of pulsation in the aneurysms. They were consolidated and cured. The next that was heard of the patient was that he was in the Camberwell Infirmary. He had been latterly a most troublesome patient, and did not long remain in the infirmary. He recovered his powers of locomotion, and just before the holidays he appeared in the corridors of the hospital, well able to walk without a stick, looking remarkably well in health, and with the aneurysms still quite well. He was requesting permission to go to Australia and back for the voyage, and wanting medicines for imaginary ailments. In fact, he was surprisingly well considering what had been the condition of his arteries; but his brain was failing, and he was apparently becoming imbecile.

The other patient, by name C. H——, aged thirty-three, a valet, was apparently a strong healthy man. He had had a soft sore on the penis nine years before, followed by an inflamed gland in the groin, which suppurated and was opened. He was treated at the Lock Hospital in Soho. He has had no symptoms of syphilitic infection. Some years ago he had gonorrhœa, followed also by a bubo. His family history is good. The father and mother are both alive, and there are four sisters alive and healthy. One brother died in infancy. The patient for the last six months has at intervals felt aching pains in his right calf. In November last an attack of pain lasted for two days and compelled him to lie up. The pain recurred for three days at the beginning of January. Early in March the patient first noticed a swelling in the right popliteal space, in which he often had attacks of pain, much increased on walking, and for this he consulted Mr. Burt, who at once sent him to the hospital, and he was admitted into St. Matthew ward on April 2nd, 1889. The notes taken by the dresser, Mr. Sharman, are as follows:—Heart normal, pulse at wrist normal, no evidence of atheroma of the arteries. In the right popliteal space a tumour is to be felt, about the size of a hen's egg, which is pulsating and expansile, the pulsations corresponding to those of the femoral artery. There is a distinct bruit over the tumour, which becomes very loud on pressure with the stethoscope. On compression of the superficial femoral in Scarpa's triangle the tumour disappears, and all pulsation ceases. The patient is in good health, and experiences neither pain nor discomfort from the aneurysm whilst resting in bed. The temperature is normal; the urine is acid, of sp. gr. 1018; no albumen; no sugar. The measurement round the knee over the patella is an inch more in the right leg than in the left, 14½ in. as against 13½ in. The patient was ordered iodide of potassium in ten-grain doses, with middle diet, beef-tea, and pudding. Arrangements were made for treating the aneurysm by digital compression, and it was commenced on April 10th at 2.15 P.M. The region over Scarpa's triangle was carefully shaved, and the limb below was wrapped in cotton-wool and a bandage. A number of students were in attendance, and it was arranged that each should compress the artery in the apex of Scarpa's triangle for fifteen minutes. During the first hour and a half the patient felt sick and faint, with occasional pain in the limb. He had ice and brandy, and at 3 P.M. a hypodermic injection containing one-third of a grain of hydrochlorate of morphia, which speedily had the effect of stopping the pain, and after two hours the compression was well borne. Another hypodermic containing one-fifth of a grain of morphia was administered at 8.15, and the compression was discontinued at 9.15, making seven hours in all. On examination the aneurysm was found to be distinctly smaller, firmer, and more circumscribed, and the pulsation appeared to be less, and gave one the feeling of being less superficial than before the commencement of the compression. The limb was warm and the patient quite comfortable. The pulse was 84.—April 11th: The patient feels well, but is stiff and sore. He did not sleep much. Temperature normal; pulse 84. Measurement round knee, 14½ in. Digital compression was recommenced at 9.30 A.M., and kept up in the same way until 6.30 P.M.—nine hours. Half a grain of morphia and one-fifth of a grain were given hypodermically at 10 A.M. and 5 P.M. respectively. The patient complained of pain and tenderness at the point of compression, especially at the time of changing the operator. A piece of wet lint placed between the skin and the thumb afforded relief to the patient. On examination at 6.30 P.M. the tumour was thought to be harder and firmer, but not perceptibly smaller. There was still pulsation, and a sponge was bandaged over the aneurysm, but it was removed at midnight. The temperature varied from 97·4° to 99°. Pulse regular, 84.—12th: The patient has slept well, and has little pain in the leg. The temperature is normal. The digital compression was again applied from 10 A.M. to 6.30 P.M., when the tumour appeared to be smaller and harder, and with less pulsation. A hypodermic injection of morphia, one-third of a grain, was administered at 11.30 A.M. The pulse of the anterior tibial artery of the right limb was less distinct than that of the left, but the pulse of the right posterior tibial appeared to be fuller than that of the left. The digital compression was discontinued and no further treatment was adopted for three days, and on April 15th treatment by flexion was commenced at 4.45 P.M. The leg was bandaged, and then flexed upon the thigh and fixed by bandages round the foot and a spica round the hip. At 9.30 P.M. the bandages were tightened and the knee was kept flexed until a quarter of an hour before midnight, when they were removed.—16th: The note states that "the tumour was slightly harder, and the pulsation less this morning."—26th: The aneurysm was evidently not cured, and at 4.45 this afternoon an Esmarch's bandage was applied to the limb from the foot to half-way up the thigh. The limb was placed on a pillow and a horseshoe tourniquet was applied to the femoral, and one-third of a grain of morphia was given hypodermically. At 6.5 P.M. the bandage was removed, but the tourniquet was left applied for two hours longer.

Again the note is: "Aneurysm smaller and firmer and less pulsation."—May 3rd: Esmarch's bandage was again applied, the bandage being carried very lightly over the aneurysm, from 11.15 A.M. to 6.30 P.M. The note in the evening was that "the aneurysm still pulsates slightly, but there is no pulse to be felt in the posterior tibial." The patient was much better, but not cured. He had permission, a week later (May 10th) to go out of the hospital for a fortnight.

On the 27th the patient returned with some swelling of the leg, but he was in other respects the same. He had convinced himself that he could not get about as he was, and consented to a further operation. I tied the superficial femoral on June 4th in the apex of Scarpa's triangle. The ligature used was kangaroo tendon. Some slight pain was felt for a few days after the operation in the leg and in the aneurysm, but there was no rise of temperature. The dressings were not removed until the 11th, a week after the operation, when the wound was found to be closed and nearly healed. It was dusted with iodoform and bandaged for another week. The patient was discharged on the 25th, three weeks after the operation, with the aneurysm quite consolidated and the pulsation gone.

It would be impossible in a single lecture to exhaust all the various points of interest in these cases, and I would occupy the rest of our time to-day in impressing upon you what one is very apt to forget, the natural tendency that exists in aneurysms to effect their own cure by coagulation and organisation of their contents. There is, of course, such a thing as cure of aneurysm by inflammation and suppuration, but I do not propose to say anything on that subject to-day. The object, then, that we have in view in our treatment of aneurysm is to assist Nature in her effort to bring about coagulation of the contents of the sac, and this alone. I venture to think that surgeons fail in bring ing about this result more often from doing too much than doing too little, and that they will succeed in proportion as they understand and appreciate Nature's process. In favourable cases the first essential step towards the cure of an aneurysm is the diminution of the circulation of blood through it. This permits of the formation of a layer of clot, which lines and strengthens the sac wall. If undue pressure of blood is still prevented, this clot layer will promote the formation of another, until the whole sac is filled and obliterated by these layers one within the other, the outer layers becoming organised one after the other, and connected and incorporated with the sac wall. Meanwhile, collateral circulation is established, and complete occlusion of the aneurysmal sac and the artery is the happy result. No doubt this occlusion may sometimes be produced by the sudden formation of a complete and uniform clot, but more usually it will be found to be laminated, and formed gradually in the way mentioned. On the other hand, the process may be prevented by various excitements of circulation, from exertion, mental excitement, intemperance, or disease. The object, then, of all our treatment of aneurysm, whether moral, dietetic, medical, or surgical, is, I repeat, to assist Nature in her efforts to cure the aneurysm by coagulation, and to combat or remedy all the conditions which militate against the favourable establishment and completion of the process. To quiet the circulation and diminish the flow of blood through the aneurysm is the first essential, and to promote coagulation, if possible, is the second. Rest in bed and the administration of an unstimulating but nutritious diet, have been found sufficient for these purposes without any further treatment, and should always be adopted from the first recognition of the aneurysm; and all the other methods that have been suggested and adopted have merely the same objects in view. Our rule, then, should be to try simple means first, and feel our way, trusting to nature for the actual cure, and, as it were, imperceptibly luring her to act, carefully avoiding extreme measures until simpler means have failed. Much judgment is required in selecting the proper means, but it would be well to make the above our rule.

This is not the place to enumerate all the methods of dealing with aneurysms, nor even to point out the various conditions which would render this or that proceeding desirable. I will confine myself to the methods adopted in these cases. In both you will have observed that the first treatment adopted was rest in bed, plain nourishing food, and the administration of iodide of potassium, the objects being to quiet the circulation and promote coagulation. Various methods have been tried to increase the coagulability of the blood. Bleeding and starvation, by increasing the relative quantity and coagulability of the fibrine of the blood, as well as by diminishing the force of the circulation, have had their advocates. Digitalis, tartar emetic, cathartics, have all been recommended, but I prefer to trust to maintaining the healthy condition of the blood by a proper quality of food and the administration of iodide of potassium, though whether this drug acts by diminishing the force of the circulation, or has any influence in promoting coagulation, I cannot tell you. Perhaps in some cases it does both. This simple treatment failing, it becomes desirable to try one or other of the more surgical means recommended for diminishing the amount of blood that is permitted to pass through an aneurysm. Digital compression, at the most convenient part of the artery above, appears to be the simplest proceeding in cases where it is applicable, and should be tried. This method of treatment was adopted in both the cases I have described. There are some difficulties in maintaining digital compression of the subclavian artery, and especially if the patient is inclined to be fat, but none generally in applying it to the femoral. But I believe that often the main reason for the failure of digital compression is that it is incompletely and intermittently maintained. The great object of the compression is, of course, to diminish the flow of blood through the aneurysm by stopping the supply of blood by the main artery for several hours in succession, the aneurysm at the same time being filled with blood and not flaccid and empty. If it can be borne, a great aid to this is to combine with the pressure above some pressure on the artery below the aneurysm. To do this it is often necessary to give an anæsthetic. But, when the treatment is applied solely to the artery above, it is of great importance that the digital compression be kept up fully and completely, avoiding all undue violence, and shifting the point of pressure, if possible, with each change of operator, in order that no injury may be inflicted on the artery, and that the thumbs of one operator be not removed until his successor has got his thumbs well into position. If the artery be bruised, or become inflamed and thickened, the success of a subsequent ligature may be imperilled. It is possible that in the case of axillary aneurysm the digital compression was attended with some amount of bruising, thus in part affording some explanation of the subsequent course of events. It is for this reason that I am opposed to a long continuance of any one method of compression. It is probable that the digital method failed in both these cases to complete the cure because there may have been some failure to carry out adequately and fully the necessary conditions; but it is only fair to the operators to say that patients often increase the difficulties of the treatment.

In the case of popliteal aneurysm it was possible to adopt two other methods of diminishing the flow of blood through the artery involved. Treatment by flexion of the limb is especially suitable to cases of popliteal aneurysm. I have twice succeeded in bringing about complete coagulation by this method, and I think that it should be more often tried. It failed, however, in this case, and I cannot tell you why. The treatment by Esmarch's bandage failed too, partly on account of its following the other methods, which had already resulted in the formation of some laminated clot, and partly because it emptied the aneurysm of all fluid blood. I would caution you to be very careful in your use of this method, as it is not free from danger to the limb; but I believe that this treatment is very successful if it be carefully watched, as it stops flow of blood in vessels beyond as well as above the aneurysm, and it is possible to employ it without emptying the aneurysm itself. The final resort in the treatment of both cases was ligature of the artery above, and it was partially successful in the one case and completely so in the other.

Much interest attaches to the case of axillary aneurysm, as it well exemplifies the tendency to spontaneous cure. There was first the more than suspicion that the patient had had a previous aneurysm which had spontaneously cured itself, and there was afterwards the spontaneous cure of two aneurysms at once, accompanied by somewhat sudden hemiplegia and head symptoms, showing that some portion of clot had in all probability been dislodged and had blocked the aneurysms, a minute portion of clot having also found its way into a cerebral vessel. The gradual but steady recovery of the paralysis and the after brain degeneration all show that an embolism was the only explanation of these symptoms. But the interesting fact remains that both the axillary and subclavian aneurysms are completely and permanently cured in spite of, or perhaps in some measure due to, a far from healthy condition of the arteries themselves.

ABSTRACT OF

The Morison Lectures

ON

THE NEUROSES OF DEVELOPMENT.

Delivered at the Royal College of Physicians, Edinburgh,

BY T. S. CLOUSTON, M.D., F.R.C.P.E.,

MEDICAL SUPERINTENDENT OF THE ROYAL EDINBURGH ASYLUM, MORNINGSIDE.

THE lecturer proposed to treat the subject rather in a suggestive than exhaustive manner. He drew attention at the outset to the fact that the brain is found to have attained its maximum weight at about seventeen or eighteen years of age, although it has attained its full growth to within a few ounces at the age of seven years. From birth to seventeen is the period of combined growth and development of the brain; from seventeen to twenty-five is the period of brain development without growth. Physiological and pathological facts prove that the cells of an organic tissue have different qualities and are subject to different diseases during the two periods of increase of bulk and development of function. While cells are multiplying in number or size they do not energise in precisely the same way as they do after growth is completed. In the former there is of course more formative energy, and they consume more oxygen and excrete more carbonic acid and urea, and are more prone to proliferative diseases, and therefore diseases of altered function and degeneration. During the two periods mentioned the brain cells have different qualities, and still other qualities at maturity. After the brain has attained its full weight it takes at least seven or eight years to develop fully its special powers and qualities. The differences between what the brain of the child and that of the man can do is quite indescribable; the organ at these two periods might belong to two different species of animals. So far as microscopic appearances are concerned the tissues are often much the same whether an organ is fully developed in function or not. This is owing to our present imperfect methods of histological research. No histological or chemical difference can be, by present methods, demonstrated between the brain of the early adolescent of fifteen and the man of twenty-five, and yet the functional differences are indescribable. It must be assumed that where difference of function exists there must also exist difference of structure. Life was divided into two physiological eras of non-reproductive and reproductive capacity; he considered the distinction the most important one that could be made, and had not yet attracted sufficient attention. He then indicated the relation of pathological disturbances to the onset and perfecting of certain physiological functions; the most serious of all the pathological defects of the brain function are neuroses incidental to the period of development; the reproductive function is then arousing the keenest emotions, the most vivid imaginations, and the most earnest volitional efforts at the same time that the brain is discharging motor, sensory, and trophic functions. He suggested that there might be a physiological coherence of the neuroses of development which would connect anatomical and other defects in a physiological relation to more purely neurosal defects. He stated as a physiological fact that an individual organ can come to full perfection, and yet other organs in the same body be still imperfect and undeveloped. The child's skin is softer than that of the adult, and yet it is certain it is not so resisting against the germs of ringworm and many skin diseases. Any organ or tissue that is not resisting to disease may be said not to be mature. Scarlatina and ringworm and similar diseases can be looked upon as due to developmental or trophic defect just as rickets undoubtedly is. Pathological considerations hang so directly on physiological facts that they cannot be dissociated. There is an important, as yet unwritten, physiological chapter on the direct order of development and coming to perfection of the various organs. Whatever tissues come soonest to perfection, it is certain that nervous tissues come latest, and take longest time to do so. While a red blood-corpuscle probably comes to perfection in the second month in utero, a cell of the cortex does not attain maturity until twenty-five. In fact, the extreme slowness of development of brain, after growth has taken place, is a cardinal fact, and it is during this period of development that hereditary influences for good or evil come out in an exceptional way. Those tissues which develop slowly are those in which hereditary evil influences are shown. The brain from four to seven is increasing in bulk more than at any other time of life, and it takes eighteen or nineteen years to attain functional perfection. All that was worth doing or feeling in life was done after twenty-five years. He showed that the three great factors during development were age, onset of function, and heredity. In the evolution of the great brain functions, the trophic were first, then common and special sensation, then coördinated motion, then the various mental faculties, then the coördination of motion and emotion, then reproduction. That normally the reproductive function takes several years to develop after its first appearance is not fully understood. The period during which reproduction gradually comes to perfection is beyond question one of the most important. Reproduction was to be regarded as but one incident in a continuous protoplasmic life, which made a man continuous with his ancestry and posterity, and not a different being at all in a philosophical sense. Hereditary defects are brought out at certain stages: (1) in utero—the formative and embryonic stage,—in which the lesions were extremely coarse defects; (2) the period of most rapid brain growth (from birth up to seven), where the diseases were convulsions, epilepsy, meningitis, &c.; (3) the period of coördination of motion or emotion—that is, the period of pre-reproductive growth (between seven and thirteen), wonderfully free of neurotic defects: (4) the period of puberty and adolescence (from thirteen to twenty-five), which was characterised by the development of neuroses, especially as regards mind. He then discussed the relationship of the development of one function to that of another, and showed that disease resulted sometimes from an abnormal order of development, one function or faculty remaining undeveloped, while others are normal or over-developed. Child musicians and child poets are more or less pathological, and what we should promote in them was general development. Development of any faculty or power in a girl or boy, in a lad or maiden under twenty-five, that was premature in time or that was clearly out of proportion to other faculties and powers, should be carefully watched and looked on with much medical suspicion. It was often unfortunate when such qualities as courage, obstinacy, and self-confidence arose before there was judgment enough developed to regulate them: they were indications of error in order of development, and were the premature development of something that would have been most useful and necessary at a later period. Development of faculties mental and bodily must be in proper series. He in conclusion pointed out the lack of accurate knowledge in regard to the normal and abnormal in development and heredity, and the need for extended facts on these points.

A MEDICAL HOLIDAY:

Being the Opening Lecture to the Class of Therapeutics, Session 1890–91.

BY M. CHARTERIS, M.D.,

PROFESSOR OF THERAPEUTICS AND MATERIA MEDICA, GLASGOW UNIVERSITY.

A CHARMING book has lately been written by Jerome, entitled "The Idle Thoughts of an Idle Fellow." It is amusing, full of anecdote and witty sayings, and I advise you to read it after the reaction, say, which follows the ordeal of an examining board. After a winter and summer session a man becomes somewhat fagged, and to such a one idleness or a holiday is as pleasant as it is to a schoolboy; and this idleness, at least the recollection of it, is more enjoyable when his hours of leisure combined pleasure and relaxation with advantage to himself and to others who may become interested by what he has seen. I wish, therefore, to tell you how I spent my holiday during the autumn months of this year. I went to Norway, and subsequently visited various health resorts in the south of England. Norway is replete with interest. Nature can

there be seen in its grandest aspects at a very reasonable outlay. The rock-bound coast, the lofty mountains, some covered with eternal snow, the beautiful sweep of the fjords, the immense lakes, the short, swift-flowing rivers, form pictures which no language can fully depict. They cannot be described, one must see them to realise them. The people are simple in their habits, honest, frugal, and hardy, and present the best types of the Scandinavian race, uncorrupted by too much civilisation, true children of nature. If any one of you should elect to go to Norway, do not attempt to rush, as many foolishly try to do, by hurrying from place to place, but rather linger on some favoured spot, and thence make excursions by steamer, by rail, by carriole, or on foot. Then, but not till then, will a holiday there be pleasant; then, but not till then, will an adequate conception be formed of its country and its people. One of my chief objects in choosing Norway for part of my holiday was to make myself acquainted with leprosy, and for this purpose I visited Bergen and its noted Leper Hospital. I was courteously received by Dr. Carl Looft, who speaks English well, and who was able to show and explain to me in all its stages this ancient and remarkable disease. It is unnecessary to enter into the history of leprosy. It is sufficient to explain to you the two forms in which it is seen—viz., the anæsthetic and the tubercular, the symptoms and course of which are different.

The *anæsthetic* is ushered in by a tired feeling, followed by neuralgic pains in different parts of the body. Subsequently spots, rather difficult at first to detect, appear on the arms and face. As the disease advances they are seen to be symmetrical, brownish red in the periphery, and in the centre white. They assume in time the size of a filbert or walnut. Anæsthesia is detected over the spots, and also on some fresh parts of the skin, and there may be also swelling of the glands. Contraction then sets in, which as a rule is permanent, and is associated with the distribution of the facial, the ulnar, and the nerves of the extremities. Paralysis follows, and ultimately topical necrosis of the bone. The course of this form of leprosy is slow, and may extend over a number of years. Thus I saw in the hospital a man who had been an inmate for thirty years.

The tubercular.—In this form a symmetrical tubercular eruption appears on the face, arms, and legs, and afterwards on the trunk. After a time the tubercles soften, suppurate, and break, and the disintegrating process affects the bones. The course in the tubercular is more rapid than in the anæsthetic, and death occurs in from eight to ten years. In some cases healing of the sores occurs, and brown spots with white cicatrices mark their sites. At times, also, the lungs are affected with phthisis, and the bacillus of Koch, but not the bacillus of leprosy, is recognised. The bacillus of leprosy is seen in both forms, but naturally, as the course of the disease indicates, it can be detected at an earlier stage of the tubercular than in the anæsthetic. It differs essentially from the tubercle bacillus in the following points. It is never seen in the lungs, kidneys, brain, or spinal cord. There are with it no bloodvessels, no caseous degeneration, and no giant cells. It is distinctly formed in a cell, and not—as Unna, the celebrated dermatologist, states—in the lymphatics. Further, a minor distinction between the two bacilli is this—that the tubercular bacillus colours quickly with aniline; the bacillus of leprosy with difficulty.

The opinion at Bergen with regard to the disputed question of contagion is very decided. They say the disease is not, in the ordinary sense of the term, contagious. During a series of years the disease has not been transmitted to any attendant in the hospital, with the exception of one case, where a washerwoman attached to the hospital, neglecting the usual precautions, was attacked by the tubercular form. There was in this instance no hereditary taint, yet the disease went through its usual course, and the woman died. They believe that the disease is mainly hereditary, and does not depend on any particular kind of food or on any climatic influence. It is, however, conceded that it may be contracted by a healthy person through close personal intercourse with a leper, or that it may originate from the bacillus being swallowed, or by its coming into contact with the eye. It cannot occur from inhaling the breath of a leper. In connexion with this I noted that a young man who showed me round the wards expectorated previously to entering or leaving a ward. I may also state that I saw a woman twenty-two years of age on whom the anæsthetic form was commencing. Here there was no hereditary history, no evidence of bad food; but she had been in constant attendance on a leprous woman in the country, and, from the limited size of the hut, had been obliged to sleep with her. This case was very pitiful. The woman had an attractive appearance, yet she was consigned to a living tomb, for no leper is allowed to leave the hospital or to receive a visit from friends. From its nature leprosy is necessarily attended with suppuration, and in the wards where the worst cases were observed the odour was distinctly sickening and fetid, and, except in the early stages, it is also offensive to the sight. In these advanced cases it was very painful to see the blotched face, the sightless eyes, and to hear the oppressive and heavy breathing of those who were slowly but surely nearing their end.

Treatment.—In ancient times the leper was banned by the Church and boycotted by the people, and old writers tell how "a pair of clappers, a barrel, a stick, cowl, and dress, were given to him. He was interdicted from appearing without his leper's garb. He was forbidden to walk in narrow paths, to answer those who spake to him, unless in a whisper, that they might not be annoyed by the pestilent breath, and by the infectious odour which exhaled from his body. The official of the Church terminated the ceremony of his separation from his fellow creatures by throwing upon the body of the poor outcast a shovelful of earth in imitation of the closure of the grave." Alone and unattended, except by his fellow sufferers, he had to "dree his weird." The march of civilisation has altered this condition of matters. Father Damien's noble life and tragic death lent additional force to efforts that had been made in mitigating the sufferings of the lepers. The cause and prevention of the disease have been discussed in the press, and in professional and social circles, and royalty has thrown its ægis over the proposal of a national leprosy fund. There is little probability of the disease spreading in this country, but in India it appears to increase unchecked, and the executive committee propose an inquiry there on its social as well as its medical aspects. Such an inquiry, by enlisting native sympathy in its support, must pave the way for legislative action, thorough and complete, by which the leper will be removed from the haunts of men to well-selected hospitals. For this separation is the only treatment which according to our present knowledge is of any avail. When the disease begins there is no hope for the afflicted one. No medicine seems to arrest its progress. With reference to this I wrote to Dr. Looft, and asked information on two points—viz.: 1. Is separation in Norway compulsory? 2. Have perchloride of mercury injections been tried in the early stage of the disease? He replied: 1. "We have in Norway no law which compels the leper to enter the hospital. The law says about the lepers that if the hygienic police find that the leper cannot get the necessary nursing at home, and that there is danger of the family being infected, the hygienic police shall compel him to enter the hospital. 2. Dr. Danielssen, the old experienced leprosy surgeon at this hospital, said to-day to me that thirty years ago he had tried an injection of the perchloride of mercury in all stages of leprosy, but never with good results. The lepers became worse, and boils and eruptions ensued." If the perchloride had been injected as an albuminate, I should think, whatever influence it might have exerted on the disease, that there would not have been the sequelæ mentioned.

I now pass on to speak of the second part of my holiday. I walked from Plymouth to Penzance, and visited Torquay, Exmouth, St. Ives, Falmouth, and Exeter. Subsequently I took the steamer to the Scilly Islands. The Scilly Islands occupy a unique position. Within an hour from Penzance, the rocky coast of Cornwall, embracing Land's End and the Lizards, is lost sight of, and then looking seawards you observe faintly with the unaided eye a group of rocky prominences springing right out of the ocean. As the steamer draws nearer these, you perceive the individuality of each in its greater or less extent. In number they are about 300, five are inhabited and forty bear herbage. St. Mary's is the largest inhabited island, and we landed on its pier, after passing through a beautiful natural harbour. The circumference of the island is about nine miles, and a forenoon walk easily enables one to make its circuit. Except on the coast line it is by no means barren, for the soil in the inland is dry and fertile. The temperature is very equable. There is no extreme cold in winter or excessive heat in summer. The official record shows a mean

summer temperature of 58° F., and 46° in winter. The rainfall is about the average of what is recorded in the south-west counties of England. The prevailing wind is a genial south-wester, but occasionally a piercing blast from the east continues for some days.

As regards fogs, my inquiries were very particular, and I satisfied myself, from looking over the books kept with great care at the Meteorological station, that in the months of April and May there might be two or three days of fog, partial or complete. In the other months of the year they are rarer and never continuous—a slight fog in the morning, clearing away as the day advances. Fogs, as you are aware, prove very detrimental in hastening or evoking pulmonary changes. But the fogs here should not act as deterrents for anyone desiring to make a climatic change in winter. Further, the peculiarity of the change to St. Mary's is this—that it would give all the advantages of a sea-voyage with a minimum of the drawbacks. The exposed position of the island guarantees an abundance of saline particles in the air—the great desideratum in a sea voyage. There is an equable atmosphere during the day to draw these into the system, and the patient can have, in hotel or lodging, all those comforts in which land must be ever superior to the sea. On a stormy day he need not leave the house. He can survey the scene from an armchair and before a comfortable fire, and not, as at sea, with the dread which even the bravest feel when a gale is blowing and the hatches are battened down. Further, meals can be obtained at regular hours, with no qualmy sensations, and rest can be secured at night, uncribbed, uncabined, and unconfined. These advantages are great; they cannot be minimised. Yet a residence at St. Mary's would have certain disadvantages as compared with other winter health resorts, or even from a life on a well-appointed steamer. The island is small, the position is cramped, its surroundings and its hidden treasures can be found out in a forenoon's walk; there is a lack of society, and there is the banishment from friends, periodicals, and newspapers. The steamer from Penzance, with mails, comes in winter once a week, but its days of sailing are not fixed. These depend on the exigencies of the weather, and some aver that on account of this there may be not exactly a famine in the land, but a deficient supply of fresh provisions, butter, milk, or eggs. With regard to these I may relate the following anecdote. I was sitting in the evening with a friend on the verandah of Hugh's Hotel, the view from which when the sun is setting being beautiful in the extreme. We were admiring the prospect when a lady and gentleman approached. The latter stepped into the hotel; the lady remained outside. The evening was warm and pleasant. We forgot the necessity of an introduction, and entered into conversation with her. She had travelled. She was voluble. She lived in London, but had come to St. Mary's with her husband for the purpose of fishing. She had a doleful account to give of the island. There was no butcher, and the meat which came to the island by the steamer was at once pounced upon by the hotel keepers. One day the dinner consisted of vegetable marrow and sardines. She looked cheerful and happy, but she stated she had lost 8lb. in fourteen days. Her story was plausible, but it was not true, for we learned that butcher meat could be purchased every day of the week with the exception of Sunday and Monday. The governor of the island lives at Fresco, near to St. Mary's. His garden there, under the care of a Scotsman, testifies in a striking manner to the geniality of the climate. We saw palm trees and exotic plants only cultivated in hothouses growing in the open air. There was also a collection of ferns of all kinds and cacti. At the entrance to the garden you observe figure-heads gathered together from wrecks at different times. Some of these date back 200 years, and have been picked up from time to time by the fishermen round the coast. We learned that from St. Mary's the steamer is sent away early in January laden with narcissi and lilies for Covent-garden and other markets. New potatoes are exported in the beginning of April. Where vegetation is good there also human life will thrive; and as bearing on this I shall conclude my remarks by reading a letter from Dr. Moyle, who has practised his calling for forty years at St. Mary's. After speaking of the winter and summer temperature, to which allusion has already been made, he says, "Frost and snow are very rare; I have only witnessed snow six times, and then it only lay on the ground for a very few days. With regard to chest diseases, pneumonia and acute bronchitis are very rare. There is phthisis, not, however, due to the climate, but the result of heredity. I could certainly recommend the climatic conditions as favourable to sufferers from pulmonary diseases and as a beneficial health-resort from December to March. There are excellent and reasonably priced lodgings to be had. There is a good market and a plentiful supply of potatoes, eggs, and cream—the Cornish cream so valuable as a curative agent in phthisis. I can from my lengthened experience state that this island is in every way a desirable residence for invalids with weak chests."

These words, garnered from the experience of a man who in the evening of his days is retiring from active work, seem convincing and true. They are beyond criticism and above cavil.

Glasgow.

EXPECTANT TREATMENT *VERSUS* OPERATIVE INTERFERENCE IN CASES OF TUBERCULAR JOINT DISEASE.[1]

BY W. WATSON CHEYNE, M.B., F.R.C.S.,
SURGEON TO KING'S COLLEGE HOSPITAL AND TO THE PADDINGTON-GREEN CHILDREN'S HOSPITAL.

THERE is one question which presents itself at once to every practitioner when he comes across a case of tubercular disease of a joint—viz., "Shall I employ expectant treatment in this case, or must operative measures be at once adopted?" and even after the decision has been made in favour of expectant treatment a similar question is constantly forcing itself on his notice during the progress of the case—viz., "Shall I go on with expectant treatment, or has the time now come for operative interference?" These are the questions which I propose to discuss in this paper. Before going further, I may state that by expectant treatment I mean all those forms of treatment, such as rest, extension, counter-irritation, pressure, &c., in which the skin is left intact, and under operative treatment all methods in which the skin is divided, varying from simple incisions to amputation.

In order to arrive at a just conclusion on this question, it is, above all, necessary to be able to picture to ourselves the general state of matters in the joint, more especially as to the distribution of the tubercular disease; and therefore I propose, in the first instance, to recall the chief points in the pathology of these affections. Tubercular disease of a joint is, as its name implies, disease in which the essential element is the presence of tubercular tissue; and I shall therefore show, in the first instance, three specimens to illustrate the three most important characteristics of such tissue. The first quality of tubercular tissue to which I would draw attention is its infectiveness. We do not find a single tubercle in a part, but as soon as one tubercle is formed others rapidly appear around it, and thus the disease goes on steadily spreading. A second quality of tubercle is its irritating character. I have said that the essential element in a tubercular disease is the presence of tubercular tissue; but, in addition to this, we also find a varying amount of chronic inflammation, and probably the greater part of the destructive changes seen in a joint is due to this inflammation rather than to actual destruction by the tubercular deposit. And this chronic inflammation is of importance not only on account of its destructiveness, but also because it enables the tubercular tissue to spread more readily and rapidly than in a healthy part. And it is in acting on this chronic inflammation that, I think, the chief effect of expectant treatment depends. By placing a limb at rest, employing extension, and applying pressure and counter-irritation, we do not act at all directly on the tubercular tissue; but these means are of known efficacy in controlling chronic inflammation, and in this case, by so controlling and diminishing the chronic inflammation, we indirectly render it more difficult for the tubercular virus to spread, and place the tissues in a better position for overcoming it. The third quality of tubercular tissue to which I would allude is that it is shortlived, and has a marked tendency to undergo a peculiar degeneration termed "caseation," and as this caseous material goes on accumulating,

[1] A paper read at the Harveian Society on Oct. 16th, 1890.

we by-and-bye, where the tubercles are closely packed together, come to have a collection of caseous material intermixed with fluid and pus cells, and surrounded by tubercular tissue—i.e., a chronic abscess. In fact, a chronic abscess is nothing more or less than a tubercular tumour with a fluid centre.

Passing on now to the general pathology of tubercular disease of joints, we find that the tubercular deposit may appear in the first instance in one of two structures of the joint—viz., in the synovial membrane or in the bone, and it usually, I think, commences only in one of these structures, and not commonly in both at the same time. In the synovial membrane it begins either diffusely over the whole membrane, or more commonly, in my opinion, at one or more points, from which it spreads slowly or rapidly over the rest. In primary synovial disease the tubercles lie at first just under the surface of the synovial membrane, while the membrane and the tissues outside it become swollen, sometimes very greatly, the swelling being composed mainly of inflammatory material. Clinically, we meet with two forms of primary synovial disease—the one only seen at an early stage, where only a portion of the synovial membrane is affected; the other where the thickening involves the whole of it. In the localised form we have again two types—one, a rare condition, where there are one or more well defined, often pedunculated, tubercular masses hanging into the joint cavity; the other, where we find a somewhat indefinitely limited thickening of one part of the synovial membrane. The latter is, I believe, much the most common form, although, unfortunately, it does not often come under notice, because the disease very soon spreads over the whole of the membrane, and it is not as a rule till this has occurred that the patient applies for treatment, or that the affection is recognised. Where the whole of the synovial membrane has become involved we have all sorts of appearances, varying from very slight thickening, often complicated with clear fluid (hydrops tuberculosis) or chronic suppuration (empyema tuberculosum) in the joint, to very marked, pulpy swelling, with or without abscess formation. After the synovial thickening has lasted for some time the new tissue spreads over the articular cartilage, destroying it, and then affects the superficial layers of the bone, giving rise to the condition termed "caries."

Primary tubercular disease of the extremities of bones occurs in the form of one or more localised deposits in the bone, rarely as a more diffuse tubercular osteo-myelitis. These deposits present two chief types—in the one, the osseous trabeculæ are entirely or almost entirely, absent, and the deposit is composed of a mass of cellular tissue containing tubercles usually undergoing caseation; in the other, sclerosis of the osseous trabeculæ occurs, and a mass of new bone of varying density is formed, which usually becomes more or less completely separated as a tubercular sequestrum. As time goes on these deposits gradually spread towards the surface of the bone, and ultimately reach it in one of three situations. In some cases they are situated close to the articular cartilage, which they perforate, and thus communicate with the joint cavity; infection of the whole surface of the synovial membrane at once follows, and chronic suppuration generally occurs in the joint. In a second set of cases the deposit reaches the surface at the point where the synovial membrane is reflected on to the bone and leads to localised thickening at that part, which then gradually spreads over the whole of it, following the same course as in a primary localised affection of the membrane. In the third case the deposit reaches the surface outside the joint altogether, and a chronic abscess forms over it, while the evidences of joint disease may be slight or entirely absent. These primary deposits in bone are often difficult to recognise. In some cases they are small and situated immediately beneath the articular cartilage, and give no certain indication of their presence till they have formed a communication with the interior of the joint, when the symptoms generally become more or less acute. Where, however, the deposits are larger, they cause a considerable amount of inflammatory thickening of the bone around, and in the knee-joint, for example, the fact that there is greater thickening of one part of the ends of the femur or tibia or of the patella than of the rest points, along with other symptoms, to the presence of a deposit in that part of the bone. Additional information may also be obtained in the case of superficial bones by percussion; instead of a uniform note over the whole bone, one obtains a less resonant sound over a deposit. In some cases also, where the deposit is near the surface, a tender and often a soft spot may be made out.

Coming now to the consideration of the question proposed, no rules can be laid down which are generally applicable; each case must be considered by itself, and the decision of the practitioner will to a great extent depend on the views which he holds, firstly, as to the curability of tubercular disease, and, secondly, as to the risk of infection of the lungs or the body generally from the local joint disease, and as to the value of operative interference in preventing such supposed infection. It will also depend on a great number of other circumstances, such as the age of the patient, his general condition (more especially the existence of phthisis or tubercular disease elsewhere), the presence or absence of a marked hereditary tubercular history, the circumstances of the patient (more especially the length of time which he can afford to devote to treatment), the joint affected, the question of the future usefulness of the limb, and, above all, the local condition. These are the points, therefore, which we must now discuss.

The frequency with which one will employ expectant treatment, and the length of time for which one will persevere in that treatment, depend of course on the view held by the practitioner as to the malignancy or curability of tubercular disease. Some surgeons maintain that the disease is very amenable to expectant treatment when thoroughly carried out and patiently persevered in, while others take a more gloomy view, and look on the supposed cures after expectant treatment as in the main instances of quiescence rather than of cure, and in speaking of operative measures compare the disease to cancer; and therefore advocate early, thorough, and wide removal of the affected tissues. Both these extreme views are undoubtedly much exaggerated, but of the two I think that the second is the most erroneous and mischievous one, as being likely to lead, firstly, to excessive zeal in operating, and, secondly, to too radical operative measures. Let us for one moment contrast the life history of these two diseases. A malignant tumour, once it has taken root in the body, has, so far as we know, no tendency to undergo spontaneous cure; if it is not removed, it will certainly spread locally, and ultimately infect distant parts of the body, and cause the death of the patient. On the other hand, tuberculosis in man is essentially a local disease, and is only able to spread over the whole body under exceptionally favourable circumstances. In the struggle between the tissues of the human body and the tubercular virus the opposing forces are pretty equally matched, and the victory does not by any means with certainty rest with the bacillus; on the contrary, the local tubercular processes very often cease to extend or disappear (not merely quiescence, but in a good many cases actual recovery) without any operative interference. Here we have a great distinctive line between cancer on the one hand and tuberculosis on the other, and one which shows that not only as regard pathology, but also as regards treatment, the two diseases are not at all on the same footing. The power of the tissues in overcoming the tubercular virus is evident from a variety of facts, both from the results obtained by expectant treatment and from those of various forms of operative treatment in which the diseased tissues are not completely removed. For example, there are now a considerable number of cases on record of tubercular peritonitis (verified as tubercular in some cases by microscopical examination of portions removed) which were steadily getting worse but recovered, and in some instances have remained well, although all that was done was to make an incision into the peritoneal cavity and close it again. Similarly free incisions through thickened synovial membrane or into the bone often lead to improvement and sometimes to cure, although none of the affected tissue is removed. Thus, in statistics of over 400 cases treated as in-patients which I put together two years ago, and on which my remarks are mainly based, I find that in the case of the knee-joint arthrotomy or simple incisions into the joints and sometimes into the bones without removal of any tissue was performed in 19 instances, in 9 of which there was no pus in the joint, and of these 19 cases, 9, or 47·3 per cent., got well without further operative treatment, while 1 was almost well when discharged, and 1 recovered after the application of the cautery after the wound had healed; the remaining 8 required further operative treatment. Then, again, a large proportion of chronic abscesses, which, as I have pre-

viously said, are nothing more or less than tubercular tumours with fluid contents, have recovered by aseptic drainage without removal of any portion of the wall, and without any antiseptic application to their interior. For example, of 58 spinal abscesses which had been under treatment, 38, or over 65 per cent., had been cured up to the time when the statistics were made up, while others were doing well, and the list of cures would have been larger had not some of the cases become septic. Then, again, in some instances, I intentionally perform a partial arthrectomy, only removing a portion of the tubercular tissue, and in suitable cases a cure has followed. I need not take up further time by referring to other instances, such as subperiosteal excisions and excisions as ordinarily performed, where cure results, although the disease is by no means entirely removed. But even where we attempt to remove all the disease, unless we do it by amputation wide of the joint, the condition in which the wound is left is not the same as after an operation for cancer. In performing arthrectomy or excision, we cannot avoid cutting through tubercular tissues, and there is no doubt that after the operation a large amount of the tubercular virus is left in the wound, and that the wound would certainly become infected again after the operation were it not that the tissues have a great power of overcoming the parasite, so long as they are not weakened by other causes, such as septicity. These facts are sufficient to show that the analogy with cancer is a bad one, although I think that those who take the view of great curability and persist in expectant treatment in all cases are also wrong, for no doubt, in many instances, the cure can be much expedited and the ultimate result improved by suitable operative measures.

The other question, that of the risk of dissemination of the tubercular virus in cases of joint disease, is a very difficult one; and I can only express in a few words the conclusions at which I have myself arrived. That patients the subjects of tubercular joint disease often become affected with tubercular affections elsewhere, especially phthisis and tubercular meningitis, is of course well known. The question which bears upon treatment is how far these tubercular lesions are due to direct infection from the affected joint and how far they arise independently. As has been pointed out, more especially by König and Volkmann, the occurrence of tuberculosis in other parts of the body subsequently to disease of a joint does not necessarily imply that infection has spread from the joint first affected. Thus, in the first place, the infection of the various organs or parts of the body may occur at the same time, the virus being carried from some common source and deposited in the various parts simultaneously; secondly, the virus may be distributed from the original source, such as a bronchial gland on various successive occasions; thirdly, subsequent development of the disease may be due to fresh infection from without, quite independently of the primary deposit; and, fourthly, it may be the result of direct infection from the primary bone and joint disease. It is thus obvious that even complete removal of the joint trouble by amputation does not by any means guarantee the patient against an outbreak of tubercular disease elsewhere, and the only question, therefore, is as to the degree of danger involved in the presence of these local deposits and as to the amount of protection obtained from their removal.

As regards acute tuberculosis, there can, I think, be little doubt that in some cases the source of the general infection is the diseased joint. In the case of hip-joint disease in which acute tuberculosis is most common, the proportion of cases is something like 4 per cent. Now, though one of these cases might possibly be rescued by early operation, there is no doubt that in some instances the operation itself is, directly or indirectly, the cause of the dissemination of the virus; and as a matter of fact, the mortality from this disease after excision is still from 2 to 4 per cent. König states that of eighteen cases of acute tuberculosis in his practice, sixteen occurred after operation; and in my own statistics, I have a record of seven cases of tubercular meningitis occurring after operation, two at least being, I think, directly caused by it. My own opinion is that while it is quite possible that some cases might not occur if early operation were performed, this advantage is counterbalanced by the risk that the operation itself may lead to dissemination of the disease, and therefore I do not think that the hope of saving a patient from acute tuberculosis is of itself a sufficient reason for operating.

(To be concluded.)

A CASE OF

PRIMARY CARCINOMA OF THE ILEUM.

BY WILLIAM B. RANSOM, M.D., M.R.C.P.,
PHYSICIAN TO THE GENERAL HOSPITAL, NOTTINGHAM.

PRIMARY CARCINOMA of the ileum apart from the ileo-cæcal valve is so rare an occurrence that I have thought it worth while to describe with some detail a case in which opportunity was afforded to make a careful examination. Among the not very numerous records of such growths I have been able to find but one paper in which a thorough microscopical examination was made—a paper by Lubarsch, in *Virchow's Archiv*, Bd. cxi., entitled, "Ueber den primären Krebs des Ileum nebst Bemerkungen über das gleichzeitig Vorkommen von Krebs und Tuberculose." The two tumours described by this author present several interesting peculiarities in common with mine; but, as will be seen later, in the interpretation of the appearances we are to some extent at variance. The subject of the growth to be here described was a patient in University College Hospital, under the care of Dr. Ringer, to whose kindness I am indebted for permission to use the notes of the case.

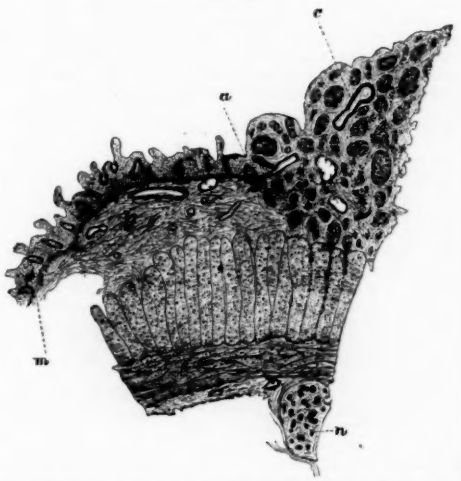
M. W——, a married woman aged fifty, was first admitted in December, 1887, suffering from metrorrhagia, and complaining also of two lumps, about the size of an egg, in the lower part of the stomach. She had also "pain after food, with diarrhœa, sometimes passing five or six stools after a bit of food." Of her previous history it was known that she had had scarlet fever as a child, and an illness called "dysentery" twelve years ago. At this time the nature of the swellings in the abdomen appears to have been not clear, the possibility of fibroids being discussed. She improved somewhat, and left the hospital in a few weeks. All through 1888 the diarrhœa continued, as well as occasional hæmorrhage from the uterus. In January, 1889, she re-entered the hospital under the care of Dr. John Williams, who removed a small polypus from the os uteri. In March, 1889, she again came under Dr. Ringer. She now showed distinct cachexia, and the abdomen seemed filled by a large hard and tender mass, the greater part of which was certainly liver. Her sufferings were further complicated by severe attacks of dyspnœa, aggravated by taking food. In April, 1889, she died.

Necropsy.—On the abdomen being opened it was found that the much enlarged liver nearly filled that cavity, reaching to within an inch of Poupart's ligament. The liver substance was studded throughout with numerous cancerous nodules, which varied in diameter from one-twelfth of an inch to two inches. Most of them were hard, some caseating, some hæmorrhagic. The wall of the bile-duct was infiltrated, but no primary growth of either duct or gall-bladder was discoverable. The portal glands were enlarged and cancerous. The œsophagus, stomach, cæcum, colon, rectum, pancreas, and spleen were quite free from any growth. The kidneys were granular, but free from growth, as were also the suprarenals. The bladder was normal. In the uterus some small nodules, shown to be fibroids by microscopical examination, were present on the surface of the fundus; but the organ, as well as the ovaries and vagina, was entirely free from carcinoma. The breasts were normal. Lungs emphysematous, with no growths. Heart small and fatty. On the ileum, about six inches above the ileo-cæcal valve, there was visible a small transverse puckering, on which were a couple of small nodules. The puckering was about two-thirds of an inch in length, and hardly constricted the gut. On opening the ileum, the puckering was found to be the seat of attachment of a rounded polypoid growth, which projected freely into the lumen of the gut. The growth was of the size of a small walnut, had a slightly mammillated surface, and was nowhere ulcerated. No other growths or ulcers were found in the intestines, the mucous membrane of which presented no conspicuous change to the naked eye. A vertical section through the centre of the tumour showed it to have a moderately firm consistence, and to be situated almost entirely internal to the muscular coats, which were clearly defined at the base. A few very fine white streaks, however, seemed to connect it with the small nodules on the peritoneal surface.

For the purpose of microscopical examination the material was hardened in bichromate of ammonia followed by alcohol,

and sections were made after embedding in paraffin and mounted on slides by Mayer's albumen method, so that no cells could drop out. A few sections were also cut in the usual way in frozen gum. I shall first describe the condition of the mucous membrane in the neighbourhood of the tumour, and then trace the changes to the centre of the growth. An inspection of the mucous membrane under a low power (Fig. 1) shows a distinctly abnormal condition,

FIG. 1.



a, Edge of growth. *c*, Dilated crypt of Lieberkühn. *m*, Muscularis mucosæ. *n*, Nodule on serous coat.

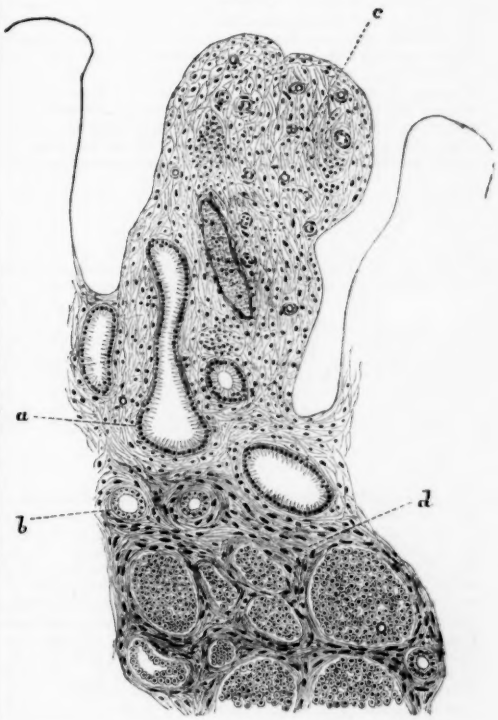
but no sign of neoplastic activity. Even in the paraffin sections the surface epithelium is absent except in patches, the crypts of Lieberkühn are scattered irregularly and often separated by considerable tracts of connective tissue, and the villi are few, mostly shrunken, and of irregular shape. Of the central lacteal no trace as a rule remains, but the substance of the villus is made up of very vascular connective tissue, in which the capillaries are in places so abundant as to give almost an angiomatous appearance. (Fig. 2.) The scanty intercapillary tissue consists of oval and

FIG. 2.

Note.—The engraver has inaccurately given the epithelium cells a striated border.

fusiform cells. The cells of the surface epithelium nowhere present a striated border, and occasionally show a tendency to change from the columnar to the cubical form. The epithelium of the crypts is fairly normal. The muscularis mucosæ, submucous, muscular, and serous coats show no changes of importance. Approaching the tumour itself, we find at the angle formed by its projection that the crypts of Lieberkühn grow deeper, bifurcate, and present cystic enlargements, the lumen of which may or may not be traceable into that of the crypt; the epithelium of these small cysts in many cases shows no difference from that of a normal crypt, and the spaces often contain an apparently normal mucoid secretion. A few such cysts are found almost in the centre of the tumour, and these are probably discontinuous with the surface crypts. On the summit of the growth we find traces of villi, hypertrophied and consisting of a vascular connective tissue similar to that already described, and here also the crypts of Lieberkühn show similar hypertrophy and cyst formation while retaining frequently their normal epithelium (Fig. 3, *a*). Alongside these dilated crypts occur numerous wide tubes, in which the character of the epithelium is completely changed from columnar to cubical (Fig. 3, *b*). They occur in close proximity to the former; they contain a less, but similar, secretion, staining blue with hæmatoxylin, and not red with eosin, and transition forms are visible. There can

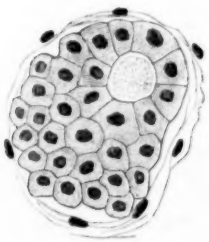
FIG. 3.



be no doubt that the slender columnar cell, with relatively small and oval nucleus of the normal crypt, has lost its inner half and become reduced to the cubical cell, with relatively much larger and rounder nucleus. But a further change yet occurs. These cubical cells may proliferate at one side of the tube (Fig. 4), and form a solid outgrowth, which may attain such dimensions that we have a large cancer acinus with an inconspicuous hole near a margin. A basement membrane is not seen round such an acinus. It may also happen, but more rarely, that the cross section of a tube exhibits tall columnar cells, hardly differing from those of a crypt, on the one side, while on the other they become shorter and squarer, and continuous with a solid mass of rounded cells forming a cancer acinus. We have thus evidence of the formation of the carcinomatous cell masses from the epithelium of the intestinal glands. In the centre of the tumour the acini form considerable masses, sometimes rounded, sometimes cylindrical, and often forming an irregular meshwork. Near the free surface of the sides of the tumour hardly any remains of villi or of

crypts of Lieberkühn are visible, and here the cells are arranged in much smaller masses, forming small tubes or solid bars, often but three or four cells thick. Stroma in this portion is practically absent, the cell masses being separated only by capillaries supported by a minimum of fine connective tissue, almost as in a normal liver. The relation of stroma to the epithelial cell masses is throughout this tumour peculiar. In those portions where dilated crypts or small cysts with normal epithelium lie in close proximity to solid acini, the stroma consists of a scanty and delicate vascular connective tissue, which presents exactly the same characters whether it lies between the crypts or the acini. The stroma of the superficial layer at the summit of the tumour (Fig. 3, *c*) is, as has been mentioned, like, though more abundant than, that of the villi of the adjacent mucous membrane. But the bulk of the stroma in the centre of the tumour is formed by the hyperplasia of the muscularis mucosæ (Fig. 3, *d*). Of the accuracy of this statement I have convinced myself by the careful study of many sections stained in various ways. A section through the margin of the growth and adjacent intestinal wall shows the muscularis mucosæ of normal size till the edge of the growth is reached. Here it opens out into a brush-like expansion, and sends numerous strands up into the centre of the tumour, and some downwards to accompany the acini into the submucous coat, so that in places its fibres almost unite with those of the circular coat of muscles. The appearance of the fibres and their nuclei are in every respect those of the smooth muscle fibres in the wall of the intestine. A similar hyperplasia of the muscularis mucosæ was noticed by Lubarsch in the second of the two cases described by him, and the growth of the smooth muscle of

FIG. 4.



the bladder to form the stroma of an epithelial tumour is described and figured by Virchow[1] under the heading "Myocarcinoma." The variety of the supporting tissues in the present tumour, and the total absence of anything that can be considered a new or specific stroma tissue, point to the secondary importance of the stroma of carcinomata, and lead to the conclusion that what impresses us so strongly in contemplating a scirrhus of the breast is not a primary and essential part of the tumour, but the result of a secondary and possibly reactive process. The carcinoma, in short, belongs to the histioid rather than to the organoid group of tumours. It is essentially a neoplasm of one tissue, and not of a combination of tissues. The acini, which in the present case are indisputably of epithelial origin, are the one necessary part of the carcinoma. Nor is it essential that they be arranged in alveoli; for while in typical cases there is some portion, usually the older, in which definite alveoli exist, in this primary growth and in the secondary growth in the liver, we find at the marginal and newer parts a meshwork of anastomosing rods and tubes separated only by capillaries without appreciable connective tissue. Moreover, as is well known, the outlying cells of a growth which infiltrates muscular and other tissues penetrate that tissue without accompanying stroma. The appearance of a meshwork presented by the cancer masses in the present tumour is not entirely dependent on the growth of slender rods and tubes, but is partly due to the fact that the larger acini which are in definite alveoli frequently present one or more holes in their midst. These holes, at first puzzling, are found to be of two kinds. The first is surrounded by cubical or even columnar epithelial cells, and may contain a certain amount of apparently secreted substance staining blue with hæmatoxylin. The holes of this kind resemble those described by Friedländer[2] as due to hyaline degeneration of tumour cells, and Lubarsch appears to consider some of the holes observed by him as due either to hyaline or colloid degeneration. In the present case no such degeneration is observable, and the study of the smaller acini, such as Fig. 4, show that these holes are really the remnant of the gland lumen, the contents of which present the same staining reactions as the normal secretion. The second kind of hole is due to extremely delicate bloodvessels which grow into the acinus from the wall of the alveolus, and may divide so as in cross-section to produce a number of holes (Figs. 5 and 6). In most of these a very delicate wall can be distinguished; but in some of the larger ones present a perfectly circular space filled with blood-corpuscles apparently in immediate contact with healthy cancer cells (Fig. 6).

FIG. 5.

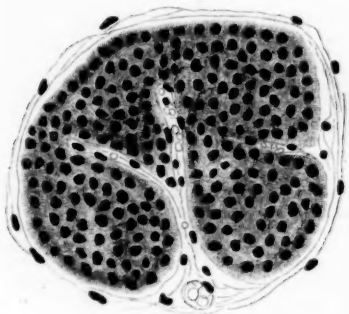
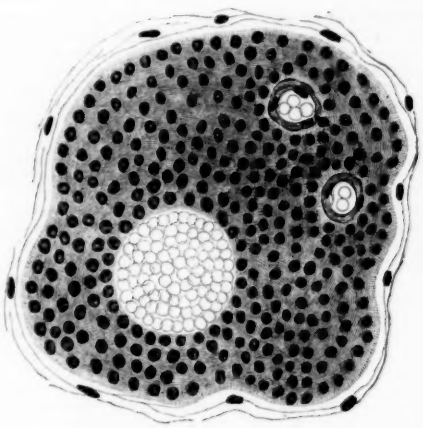


FIG. 6.



The question arises whether we are here dealing with the spread of cancer cells along perivascular lymphatics, or whether the vessels are of new formation and attendant on the epithelial proliferation. Lubarsch considered that the former view explained the meshwork appearance in his cases, and it is clear that such a mode of growth would produce such an appearance. There can, however, be little doubt that most of these capillaries are of new formation. The bulk of the new growth, the way in which the capillaries project into the large cell masses from the walls of the alveoli in parts where there is no trace of pre-existing normal tissue, and their similar relations in the secondary growths of the liver, sufficiently indicate this. They may be compared to some extent with the axial bloodvessels of the villi of papilloma of the bladder. The cancer cells are thus in the closest contact with the delicate capillary wall, and in places seem themselves to form the wall of definite sinuses.

[1] Die Krankhaften Geschwülste, Bd. iii., p. 121.

[2] Virchow's Archiv, Band lxvii., p. 121.

This penetration of the epithelial cell masses by blood-vessels is a most unusual occurrence in carcinoma, it being often stated that such an intimate relation occurs only in sarcoma. The "villous tumour" of the bladder presents, however, a somewhat similar relation of cells to capillaries, and I have also observed it in so-called adenomata of the kidneys. It is possible that attention being directed to the point, this arrangement may be found more general. The walls of pre-existing bloodvessels are, however, in places in close contact with the cell masses, which may project and even burst into the lumen of a vein. The total absence of growth in the lymphatics of the serous coat of the intestine and in the mesenteric glands shows that the infection of the liver must have taken place entirely by the portal vein. The secondary growths in the liver reproduce nearly all the appearances of the primary tumour. The cystic Lieberkühnian glands are absent, and a distinct lumen is but seldom found, but the mesh-work of columns and the larger acini with their penetrating capillaries present no differences from the growth in the ileum. The liver cells themselves are flattened and degenerating in the neighbourhood of the growths. The enormous development of secondary growths is especially remarkable when compared with the small size, and to the naked eye innocent appearance of the polypoid growth in the ileum, and brings clearly into view the favourable condition of nutrition afforded by the liver to cells introduced from without. That the ileum itself supplies conditions much less favourable may be inferred from the rarity of primary growths in its course, and from the fact that they usually remain small and polypoid, and frequently do not give rise to secondary growths. The two tumours recorded by Lubarsch caused no secondary deposits, and Langhans[3] describes as a simple polyp a tumour almost exactly resembling the present. It would seem that these tumours may for long show no, and in any case very slight, local malignancy or tendency to infiltrate or destroy, but that their virulence is brought out by and largely dependent on the conditions of nutrition and resistance offered by the tissues. A tumour, in short, may be benign in one place and malign in another; one among the many facts which should cause us to hesitate in asserting a specific difference between benign and malignant tumours.

Primary carcinoma of the ileum is very rare. There is no case recorded in the Pathological Transactions, the nearest approach being a polypus described by Mr. Durham (1885) in the ileum of a girl whose colon was covered with small villous polypi. Mr. Treves, in his "Intestinal Obstruction," has collected ten cases of stricture of the small intestine due to cancer, but it is not stated in what number the growth was primary. Lubarsch after a careful search through continental and English literature finds records of thirty-five cases occurring apart from the ileo-cæcal valve, but is of opinion that several of these were not true carcinomata. Very few detailed descriptions of the form of cancer have been given, and it seems to have been assumed that columnar epithelioma is the rule. My case, the two of Lubarsch, and probably that of Langhans, are better described as glandular carcinoma, although from the peculiar appearances produced by the penetrating bloodvessels they present some resemblance to cylindroma.

As to the conditions which favour the occurrence of primary carcinoma in the ileum, but little can be said. When Mr. Durham exhibited at the Pathological Society in 1885 the polypus of the ileum above referred to, it was suggested by Dr. Moxon that it might have arisen in connexion with the remains of Meckel's diverticulum. But that growth occurred in a girl of nineteen, who for five years had suffered from dysentery, and whose colon was covered with villous polypi. It is surely a more improbable view to attribute the polypi of the colon to the dysentery, and that of the ileum to congenital causes, than to consider both as in some manner associated with the long-standing intestinal inflammation. In the present case the clinical history points to a long-standing enteritis as probably antecedent to the tumour, and the microscopical examination shows chronic changes. In one of Lubarsch's cases the ileum contained numerous tubercular ulcers and tubercular nodules on the mucous membrane; and in his second case (also tubercular) diarrhœa had been a prominent symptom, the liver was cirrhosed, and there were six scattered small carcinomatous growths, as well as an ulcer in the ileum—facts which point to a diffuse chronic change in the gut. A remarkable case is recorded by Waldeyer,[4] in which a carcinoma arose in the ileum at the spot where adhesions formed after the operation of ovariotomy; and Birch-Hirschfeld describes one arising in connexion with the adhesions of an old typhlitis.[5] Langhans does not specially describe the state of the mucous membrane in the case of polypus of the ileum he records, but it is noteworthy that the cause of death was tubercle.

Finally I may allude to a case recently published by Israel,[6] in which a drunkard's stomach showing proliferating gastritis was the seat of two polypoid tumours—one a simple papilloma, the other a true carcinoma. He describes also a second case, that of a woman who died with all the signs of pernicious anæmia, in which a similar polypoid growth was found in the stomach. Naked-eye changes of the mucous membrane were in this case not marked, but recent advances in the pathology of pernicious anæmia make it probable that morbid changes in that membrane are usually present, and it is hardly probable that, as Israel suggests, mere loss of blood from ulceration of the tumour could cause the changes typical of the disease. He does not seem to have microscopically examined the gastric epithelium away from the growth. It is important to bear in mind that all through the alimentary canal considerable degenerative changes may occur which are not obvious to the naked eye, and the microscope must always be resorted to before the term "normal" can safely be used.

In conclusion, I would submit that while there is no evidence connecting cancer of the ileum with embryonic remains, there is a certain amount of support to a view which associates it in some way with the changes usually termed "chronic inflammation."

It may be of interest to compare with the above case of primary, a case of secondary cancer of the ileum recently recorded by Chiari.[7] Here there was an annular stricture twenty centimetres above the valve; but only the peritoneal and muscular coats were affected, while the mucous membrane was quite loosely attached to the growth, which had its primary seat in the gall-bladder.

[3] Ibid., Bd. xxxviii., p. 559

[4] Ibid., Bd. lv. [5] Lehrbuch der Path. Anat., p. 918.
[6] Berl. Klin. Woch., No. 29, 1890.
[7] Centr. f. Pathologie, Bd. i., 9-10.

GANGRENE OF THE LEG IN TYPHOID FEVER.

BY F. DAWTREY DREWITT, M.D., F.R.C.P.,
PHYSICIAN TO THE WEST LONDON HOSPITAL; PHYSICIAN TO OUT-PATIENTS, VICTORIA HOSPITAL FOR CHILDREN.

HENRIETTA R——, twelve years of age, was brought to the West London Hospital on Nov. 2nd, 1887. She had been ill four days, suffering from sore-throat, abdominal pain, and diarrhœa. During the last two nights there had been delirium. On admission, she had a coated tongue, sordes on the teeth, a temperature of 104°, and pulse of 124. Heart sounds were normal. There was some cough, and a few coarse râles on both sides of the chest. During the next three days the temperature varied between 103·7° F. in the morning and 104·5° at night, and there was frequent diarrhœa. In the daytime the patient lay on her side with legs drawn up, dull and irritable, energetically resenting attempts at examination. Throughout the night there was talkative delirium. On Nov. 6th, Mr. Webster, the house physician, who carefully watched the case, first noticed an abundant eruption of "typhoid" spots on the abdomen and back. The patient was restless and delirious, continually attempting to get out of bed. Pulse 128, dichrotic; evening temperature 105·4°. After cold sponging the temperature fell two degrees, and some sleep was procured by opium. During the next ten days respiration remained at about 42 and pulse 132. Delirium was constant, and excreta passed unconsciously. On Nov. 16th (the eighteenth day of the disease), morning remissions began to be more marked, but noisy delirium continued, and was uncontrolled by opium. Some hours' sleep, however, interrupted only for feeding, followed a dose of paraldehyde. On the 17th there was much subsultus tendinum; respiration was 44 and shallow; the pulse, which was feeble, had increased to 160, and

cardiac dulness was enlarged.—Nov. 23rd: Morning remissions had once or twice fallen to normal, and evening temperature had not for some days been above 103°. There was less delirium, and it was more easily controlled by small doses of opium. The pulse had fallen to 124; marked subsultus had, however, continued for a week. There was great emaciation, and the patient was wildly delirious.

On the 24th (the twenty-sixth day of the disease) some dark mottling was noticed on the left foot and on the leg above the ankle. The femoral artery was hard and cord-like, and no distinct pulsation could be felt in it. Heart sounds were feeble, but there was no murmur.—25th: The leg below the knee was cold, and there was dark purple and red discolouration extending from the toes to half-way between the ankle and the knee on the inner side, and to within three inches of the knee on the outer side of the leg.—27th: All sensation was lost in the discoloured skin of the leg. There had been no further extension of the gangrene. Subsultus and delirium had almost disappeared. On Dec. 14th, three weeks after the occurrence of gangrene, the temperature had only twice been up to 100.° The leg, which had been washed with carbolic lotion and wrapped in salicylic wool, had become slightly darker, and the toes were black and shrivelled. The general condition had somewhat improved.

Gangrene of leg in typhoid.

On Dec. 16th my colleague, Mr. Bruce Clarke, whom I had asked to see the case with me two days previously, amputated the limb above the knee. The muscles of the thigh, on being cut through, presented an unusual appearance. Instead of being red they were grey and pale, like meat soaked in salt and water, and there was considerable retraction of all the soft tissues. The medulla of the bone was also pale, and there was no oozing of blood. On opening up the main artery of the amputated limb, a continuous red, friable, loosely adherent clot was seen extending from the point of amputation to the division into the posterior tibial and peroneal. Below this the arteries were empty. The child eventually made a good recovery, rapidly gained flesh and strength, and was discharged from the hospital on March 18th.

Gangrene of the limbs in typhoid is not at all common. Our records of it come almost entirely from France. Trousseau[1] speaks of it as a very rare complication, which he himself had never seen; but he mentions cases which had occurred in the practice of other physicians. The first was in 1847, when the existence of typhoid was only just beginning to be recognised in France. A boy of ten years had gangrene of the right foot in the fourth week of his illness. The second was that of a young girl who also had gangrene of the right foot. The third was that of a boy of twelve, who had gangrene of both legs. Trousseau also alludes to Patry's cases. Patry wrote a paper on gangrene of the limbs in typhoid.[2] In it he gave a history of three cases of gangrene of the legs, one of gangrene of the arm, and one of gangrene of the left side of the face. In all of them there was blocking of the artery which supplied the parts affected. Liebermeister, in his article on typhoid in Ziemssen's Cyclopædia,[3] mentions four cases of gangrene of the toes. Murchison,[4] in his Treatise on Fevers, says that he has seen in rare instances gangrene of toes, ears, and other parts, and, though he mentions no case of gangrene of the limbs in typhoid, he gives an account of a case of typhus[5] in which there was gangrene of both legs, with blocking of the iliac arteries.

As to the cause of the gangrene, Trousseau, though he had no opportunity of investigating a case himself, was convinced that it was due to "thrombosis or embolism."[6] Patry[7] considered that the obliteration of the artery was due to "arteritis developed in the course of the disease." He found the lining membrane of the arteries red, rough, flaccid, distended with adherent clots. Murchison[8] considered the gangrene of typhus, and therefore probably that of typhoid, to be due to embolism. Liebermeister,[9] though he continually alludes to embolism in typhoid, and, though he considers that broncho-pneumonia is often caused by emboli in branches of the pulmonary artery, and peritonitis by emboli in branches of the splenic artery,[10] makes no statement as to the condition of the tibial arteries in his cases of gangrene of the toes. In fact, he thought that the gangrene was possibly due to the use of the cold bath, a method of treatment which he himself has so ably advocated.[11]

It is not always easy to decide whether the thrombosis of an artery is due to embolism or to arteritis. In this instance, however, the facts of the case seem very much in favour of the assumption that it was caused by a clot washed from the cavity of the left ventricle down the aorta. The patient was in the fourth week of an unusually severe attack. There had been prolonged high temperature and delirium, and there was great emaciation. The blood was in a state which is generally considered favourable to coagulation,[12] and, as was seen during the amputation, it was much reduced in quantity, so that, relatively to its bulk, a larger surface was in contact with the vessels which contained it, a condition which would further increase the predisposition to coagulate. The flabby, weak, dilated heart, which by its quick action had hitherto prevented coagulation, became on the first remission of the fever more feeble still, and all the conditions were present which produce an ante-mortem clot. This clot, no doubt, was formed either in the recesses of the left auricle or round the slackened cords of the weak columnæ carneæ, but the recovering heart drove it, or part of it, out into the aorta, and so down into the left iliac artery.

In the cases mentioned by Trousseau and Patry there was probably the same cause. In all of them the gangrene occurred late in the disease. In most it was preceded by sudden pain in the limb, such as would be caused by the impaction of an embolus, and the artery became big with thrombus.

In the spleen and other internal organs emboli continually occur, and ante-mortem clots are frequently found in the heart. Hoffman[13] met with fifteen cases of embolism of the lungs and ten cases of embolism of the kidneys in 250 necropsies, in all of which there was much heart degeneration. Murchison[14] says that fine white coagula in the heart are more common in typhoid than in typhus. He found them in the right side of the heart in six out of nine necropsies. Louis,[15] in most of his cases examined after death, found firm coagula; and Jenner,[16] in his well-known defence of the belief in the existence of typhoid published forty years ago, states that he found a fibrinous clot in as many as ten out of fourteen necropsies. A very interesting account of the formation of an ante-mortem clot is mentioned by Dr. Cayley in his Croonian lectures.[17] A middle-aged man had typhoid, with fever and delirium, for eighty days, and at the end of that time developed a cardiac lesion, which was attributed to thrombosis of the right side of the heart. There were distress and dyspnœa, and the patient became liable to attacks of syncope, and to interference with the return of blood from the head, but a *modus vivendi* was gradually established, and the patient survived. But as clots carried from the heart may add greatly to the risk of death in prolonged typhoid, to say nothing of those clots which are not carried from the heart, but remain in the heart, increasing in size and invading the great vessels, it is surely a question whether it is not an important part of the treatment of typhoid to give at the decline of the disease increased cardiac stimulants, alcoholic or otherwise, to increase the contracting power of the heart, as well as any salts which delay the coagulation of the blood. For it seems possible that the ante-mortem clot of typhoid may be quite as much the cause of death as the result of dying.

Brook-street, W.

[1] Clinical Medicine, New Sydenham Society, vol. ii., p. 412.
[2] Gangrène des Membres dans le Fièvre Typhoide, Archives Générales de Médecine, 1863.
[3] Vol. i., p. 187. [4] P. 559. [5] Ibid., p. 190.
[6] Trousseau, vol. ii., p. 414. [7] Archives Générales, vol. i. 1863, p. 135.
[8] Treatise on Fevers, p. 199. [9] Ziemssen's Cyclopædia, p. 170.
[10] Ibid., pp. 156, 169. [11] Ibid., p. 187.
[12] Michael Foster's Physiology, p. 26.
[13] Abdominal Typhus, 1869. [14] Treatise on Fevers, p. 632.
[15] Recherches de Fièvre Typhoide, vol. i., p. 302.
[16] On Typhoid, p. 81. [17] Page 80.

ON THE

RARER FORMS OF VENTRAL HERNIA.

BY J. MACREADY, F.R.C.S.,

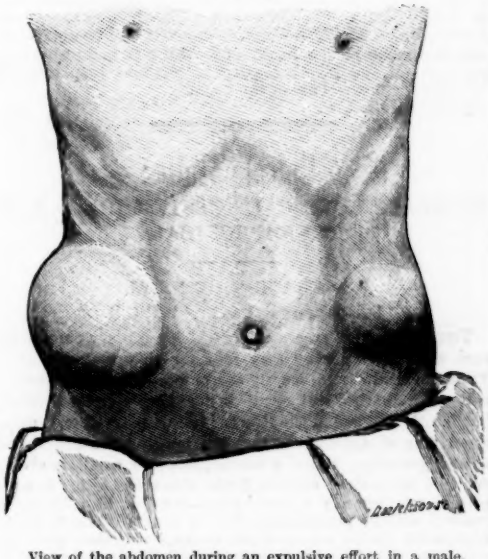
SURGEON TO THE CITY OF LONDON TRUSS SOCIETY, TO THE GREAT NORTHERN CENTRAL HOSPITAL, AND THE HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA-PARK.

(*Concluded from p. 965.*)

LUMBAR HERNIA is happily uncommon, for it has a high rate of strangulation. Even when those cases are excluded in which the hernia was reduced, there are still 12 per cent. of the whole number that suffered this accident. When it is remembered that the percentage of cases of strangulation among groin ruptures which can be approximately calculated is about from 1·5 to 2 per cent., lumbar hernia may be considered unusually dangerous.

Congenital deficiency of the abdominal parietes external to the lineæ semilunares, whilst the recti remain perfect, is an exceedingly rare anomaly. Monro[1] says that his father found the kidneys in two swellings at the back of a child aged six months just below the false ribs, and that they escaped by oval openings of considerable size. Quite recently a case has been recorded by Dr. Mastin of a boy aged six who had had since birth a lumbar hernia of the left side

FIG. 1.

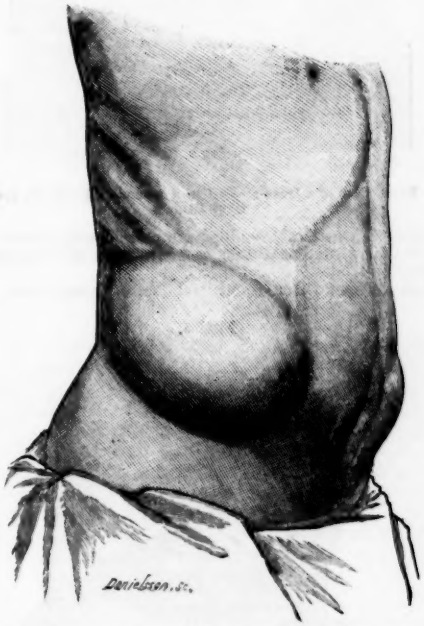


View of the abdomen during an expulsive effort in a male, aged seventeen, with congenital deficiency of the abdominal muscles. From a photograph.

It formed a large indolent swelling, nine inches across, and was apparently due to congenital absence of the muscles between the last rib and the iliac crest.

In 1882 a youth aged sixteen presented himself at the Truss Society, and has been often seen since then up to the present time. Soon after birth a swelling was observed on the right side, for which a belt was worn during six months. The lump then disappeared, but was again noticed when he began his apprenticeship as a tinplate worker, some months before his visit to the Society. He then had a hernia of the size of half a large orange; it was easily reducible, and escaped by an opening immediately below and anterior to the tip of the twelfth rib. A special truss was made for him, and in 1884 no protrusion was observed. When examined in July, 1890, no aperture could be felt, but that part of the external oblique arising from the twelfth rib seemed to be deficient for an inch or an inch and a half at its origin, and presented a remarkable contrast to the corresponding part on the left side.[2] I do not know of any case in surgical literature exactly identical with this. Congenital defect of the abdominal wall may result in a condition short of true hernia, but much resembling it, as was observed in the following case. It was kindly shown to me by Dr. Chaplin at one of my visits to the Hospital for Diseases of the Chest at Victoria Park, and was under the care of Dr. H. Sainsbury, who has been good enough to permit me to publish it. The boy's mother, during the fifth month of pregnancy, was one day following a tipsy man up a flight of steps, when he reeled and knocked her downstairs. The child was born at full term, by a breech presentation, with a slight anomaly of the heart, with talipes equinus, and a defect of the abdominal muscles. He is now seventeen, and works in a printer's office as a "layer on." When the abdomen is at rest, even in the erect posture, nothing unusual is noticed. When he makes an expulsive effort, or any effort, a swelling appears in each flank, as seen in Fig. 1. The right swelling is the larger, and occupies the space between the costal arch and iliac crest, from the edge of the erector spinæ to the linea semilunaris. The swelling is flattened somewhat, and projects an inch and a half to two inches from the abdominal wall. On the left side the outline of the tumour is circular, and on the right side almost oval (Fig. 2). The muscular

FIG. 2.



View of the same patient as in Fig. 1, showing the whole extent of the projection on the right side during an expulsive effort. From a photograph.

substance of the abdominal wall at the site of these swellings appears to be wanting, so that when the flank is squeezed between the fingers and thumb, the parietes feel as if composed of membrane. If the abdomen is carefully examined during repose, a curved, sharp, but thin edge, bounding on each side the defective areas, is detected beneath the skin, thus conveying the impression that one or more of the layers of the abdominal wall are absent. The outer segment of this sharp, curved edge corresponds to the vertical line drawn through the tip of the tenth rib. This line also marks the outer limit of the protrusion on the left side; but on the right side the wall of the abdomen, external to the defective space, bulges quite up to the edge of the erector spinæ. A tumour, like those above described, appearing on cough, was found by Dr. Homer Gage[3] in a girl aged seventeen, on the left side of the chest, and depended upon absence of five ribs.

Apart from these cases, due to arrest of development, are

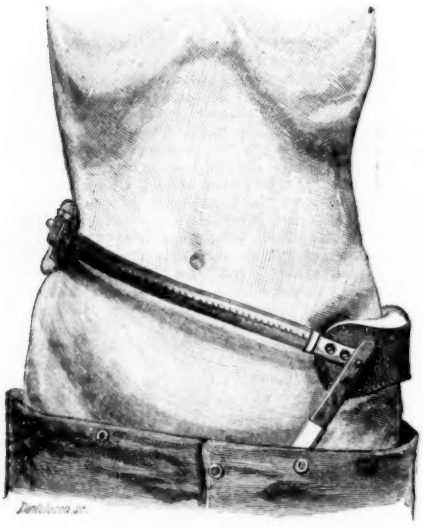
[1] Crural Hernia, 1802, p. 8.

[2] A congenital case of Dr. Q. C. Smith, which is mentioned in Gross's System of Surgery, vol. ii., p. 562, I have not been able to trace.

[3] New York Medical Journal, Dec. 14th, 1889.

others where local bulgings of the abdominal wall occur from no deficiency of the substance of the muscles, but rather from deficiency in their tone, so that over a given area all the layers composing the abdominal wall are distended. These local swellings are occasionally observed in the flanks of young children, and more often in the inguinal regions in adults.

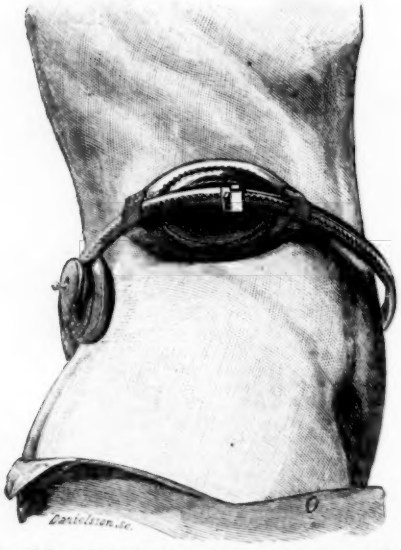
FIG. 3.



Front view of a truss applied to a traumatic hernia in the right flank.

The various forms of ventral hernia have been now enumerated, and it will be observed that in general the true herniæ protrude through aponeurotic lines or through spaces where aponeuroses, if not constant, are occasional. In the congenital cases external to the recti the muscular tissue appears to have been either absent or represented by membrane.

FIG. 4.



View of the right flank of the patient, shown in Fig. 3, with the pad of the truss in position.

In this paper so much has been said of lumbar hernia that the means of controlling it may be conveniently described here, especially as authors give very imperfect directions on the subject, and for the most part content themselves with advising the application of an appropriate truss. But usually they forbear to give particulars of the instrument, no doubt because it is so difficult to find a point of counter-pressure when pressure has to be made on the loin. This difficulty is overcome by taking the fixed point from the opposite hip where a curved piece of padded metal rests between the iliac crest and the trochanter (Fig. 3). This plate is prevented from rising by a strap passing under the thigh, attached at the front and back. The spring begins at the fore end of the hip-piece, where it is fastened by a ball-and-socket joint, and rising upwards across the abdomen curves round the flank, and ends at the middle line behind on an oval plate, to which it is connected also by a ball-and-socket joint. The pad of the truss (Fig. 4) is fixed to the spring by a ball-and-socket joint which allows slight universal movement to the spring, but this is held in check by two leather loops at each end of the pad. The truss here represented was made this year for a traumatic hernia that followed removal of the right kidney in 1889 by Mr. Hurry Fenwick. The instrument was invented in 1882 by Mr. Kingdon in conjunction with Messrs. Smith and Brooks of Hatton-garden. It may be considered as an adaptation to a truss of the figure of 8, and is, indeed, one of the most skilful machines in the whole paraphernalia of the rupture doctor. It can be applied to any protrusion in the flank, and, whilst it maintains firm pressure on the opening, permits without displacement all ordinary movements of the body.

Queen Anne-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ULCERATION OF NÆVI.

BY STEPHEN PAGET, F.R.C.S.

THERE are two processes by which capillary nævi may cure themselves: they may fade, or they may ulcerate. Those nævi which are merely one or more minute brushes or tufts of capillaries, neither raised nor sharply circumscribed, but faintly marked in the skin as hills are marked on a map, often fade of themselves, and are hardly to be considered as new growths. But if a nævus, however small, is vivid, defined, and raised ever so little above the skin, it is a permanent growth; it may vary—thus, it may be more marked during pregnancies—but it is not likely to fade. Ulceration occurs not so much in the vivid raised growths which are full of blood, as in those ill-defined patches which are tough and pale in some parts, soft and puffy in others. Such nævi are apt alike to fade and to ulcerate; they behave like scar-tissue: and perhaps some of them do arise from conditions in the embryo similar to those which after birth cause superficial scars. The ulceration, like the fading, begins somewhere towards the centre of the growth; and it may be called spontaneous, for there is, as a rule, no evidence that it is due to a blow or a scratch, or to disease. It usually occurs early in infancy; it is painless, superficial, and indolent, with a scanty discharge of viscid lymph; it tends to get dry and to scab, and leaves a pale, tight scar. If there is an underlying venous plexus, thrombosis of this may be followed by ulceration of the superficial capillary growth—e.g., an infant ten months old was brought to Great Ormond-street Hospital with the history of a birth-mark on the buttock "like a bruise," which gradually grew bright-red, but had received no treatment for the last four or five months. Then it "began to get painful," and was very tender; and the infant was brought to the hospital, with a venous nævus in a state of thrombosis, and the capillary growth over it beginning to ulcerate.

Ulceration of a nævus is in most cases a very good way of curing it; proper cleansing and dressing with some simple ointment is all that it wants. But the process

may be rapid and severe, so that the child's health suffers, and a deep rigid scar is left. Thus, in a healthy infant a few months old, an out patient at Great Ormond-street Hospital, with an ill-defined capillary growth round the ankle and the lower part of the leg, the ulceration was so sharp that the child was much reduced, and it left a hard, sunk scar. Or the ulceration may even prove fatal in a young or sickly child. Thus, a syphilitic infant, only a week old, was brought to Great Ormond-street Hospital, in whom a capillary nævus, occupying almost all the right side of the face, began to ulcerate only three or four days after birth. The orbit was attacked, the eye was rapidly destroyed, and the infant died before it was a fortnight old. An infant six weeks old was brought to the West London Hospital with a large nævus of the side of the neck, from the ear to the shoulder, which was ulcerating in two places, with free discharge. There was wide-spread sloughing, and the child sank and died. In a third case, of which I have only the mother's account, a flat red patch under the chin was noticed a week after birth; three weeks later, after a scratch, it began to "fester," and then destroyed the floor of the mouth, and the child died. But such cases as these are rare; the process itself is so common that this note of it is perhaps superfluous; but it may serve to supplement the accounts of capillary nævi given in the text-books.

Wimpole-street, W.

THIRTEEN YEARS' COMPLETE OCCLUSION OF RIGHT NASAL PASSAGE BY FOREIGN BODY; REMOVAL.

By HUGHES REID DAVIES, M.R.C.S., L.R.C.P. LOND.

ON Aug. 13th, 1890, Miss Kate T——, a young lady aged nineteen, sought my advice concerning her inability to respire through her right nasal passage. She gave the following history. Thirteen years previously, whilst swinging with some other children upon a railing in the Victoria Park, she fell with considerable violence, face downwards, upon a gravel heap. She was taken to a neighbouring surgeon, who removed a good deal of earth and gravel from her face and nostrils. After some ineffectual attempts to completely clear the right nostril the child was told to go home, and that "the remaining pieces would come away of themselves in time." From that date until the time of her seeking my advice the young lady had been unable to "breathe through the right nostril." Beyond the knowledge of the occlusion, and a slightly nasal speech—such as is often met with in cases of enlarged tonsils or pharyngeal adenoid growths — little inconvenience resulted during thirteen years. Lively recollections of the previous attempt at the removal of the obstructing mass, the pain and alarming bleeding which followed any attempt on her own part to clear the passage, rendered her exceedingly shy of seeking further medical advice upon the subject, although strongly urged to do so by her friends. Laryngoscopic examination revealed a foreign body, of hard, "mortary" consistence, situated about an inch from the right nasal aperture, forming a complete obstruction to respiration on that side. With but little trouble, and hardly any pain, I was able to remove the mass, which crumbled upon the gentlest application of probe and dressing forceps. Profuse hæmorrhage followed, but it was easily controlled by an antiseptic solution containing some tannic acid powder. Beyond a certain amount of œdema lasting a few hours, no ill-effects followed the removal of the body, and the right nostril is now as patent as the left. The mass removed completely bore out the patient's history, as it was composed of gravel, and a kind of "mortary" débris. The points of interest seem to be the long occlusion (thirteen years) of the nostril; the little inconvenience resulting, and the peculiarity of composition of the occluding mass.

Bow-road, E.

ON THE CLINICAL ESTIMATION OF FAT AND CASEINE IN MILK.

By J. B. NIAS, M.B. OXON., M.R.C.P.

I DEVISED the following process for my own needs in connexion with the subject of fat in infants' food, and believed it to be original, until, on looking up authorities, I found I had been anticipated as regards the analytical part by MM. Quesneville and Adam.[1] Put some of the milk in a test-tube with a piece of litmus paper, add a drop or two of liquor potassæ until the test paper shows the liquid to be quite alkaline, and boil. Set aside in a warm place, and the fat will rise to the top; a small but constant percentage remains behind, making the liquid opalescent. Remove the layer of fat, by a fine glass pipette, and add a few drops of dilute acetic acid, until the test paper shows acidulation. The whole of the proteids will be precipitated on boiling again and setting in a warm place. The relative proportions can be read off by a ruler applied to the tube, or a graduated tube may be used. I prefer to fill an ordinary test-tube to 100 mm., using a small steel 6 in. ruler made by Chesterman of Sheffield, graduated in millimetres and twentieths of an inch. The principle, which is that of MM. Quesneville and Adam, is the conversion of all the caseine and albumen into alkali-albuminate and its subsequent precipitation. For those who do not mind travelling beyond the contents of the ordinary urine test-case the process will be greatly improved by shaking with a small quantity of ether—or better, benzine—to bring the fat to the top, and precipitating the alkali-albumen with crystals of sulphate of soda or magnesia, or ferrocyanide of potassium. The process is not exactly what is wanted by the ordinary public analyst, or no doubt its simplicity would have brought it into use. It has the great advantage of being applicable to human milk, the caseine of which is not precipitable by simple acidulation, and I recommend it to those who, having charge of lying-in wards, have opportunities of adding to our present uncertain knowledge of human milk; as also to those who wish to control the quality of milk supplied to children's wards, crèches, &c. Anyone who uses it on the various substitutes for human milk will soon be struck with the excess of caseine or deficiency of fat presented, according to the degree of dilution. With the importance of this defect, and its proper remedy, I have dealt in another paper.

Brook-street, W.

CASE OF NON-ABORTIVE HÆMORRHAGE DURING PREGNANCY.

By J. MURRAY SMITH, M.B.

IN connexion with Dr. W. J. Rothwell's observations on the above subject in the *Obstetric Gazette* (Cincinnati) for August, 1890, and which gave rise to discussion when read before the Denver Obstetrical and Gynæcological Society, I have observed the following case, which strongly supports his views. The patient is a very spare, thin lady, aged twenty-four, the mother of two children (she was married at nineteen years old), and has had several miscarriages at varying periods of pregnancy. She has, since the first appearance of the menses at sixteen years, always suffered from a weight and bearing down, with painful and frequent micturition. An examination proved an anteflexed and anteverted uterus, with a prolapsed and greatly relaxed condition of the anterior vaginal wall. In her present pregnancy, now about four months gone, she is suffering greatly from a varicose condition of the pudendum, which, after she has been long in the upright position, gives considerable inconvenience and pain on sitting down. When about three months pregnant I saw her for a violent attack of hæmorrhage. It had soaked quite through her dress and on to the chair she was sitting on. The attack came on suddenly and without pain; in fact, it gave her relief from a sense of fulness, and it felt to her (as she expressed it) as if something had burst. The os was raw and eroded, but there was no dilatation. There was a very painful condition of the lower segment of the uterus, and the cervical plexus of vessels was very congested. The diagnosis was that it was non-abortive hæmorrhage, and the treatment recommended was the recumbent position, with raised pelvis and extremities. Hæmorrhage ceased gradually, but no abortive pains followed, and the patient has now reached four months and a half of pregnancy. The diagnosis rested on the condition of the vessels in the cervical region of the uterus, whilst there was no dilatation of the os and no labour pains.

Toddington, Beds.

[1] Frémy: Encyclopédie Chimique, t. ix., sect. 2, pp. 204 seq. Paris, 1888.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WEST LONDON HOSPITAL.

THREE CASES OF TUBERCULAR PERITONITIS IN WHICH ABDOMINAL SECTION WAS PERFORMED; REMARKS.

(Under the care of Mr. C. B. KEETLEY.)

THE notes of these cases of tubercular peritonitis were read at the last meeting of the West London Medico-Chirurgical Society, and we now publish them, as they are a not unimportant contribution to our increasing knowledge of the effect of operative measures on that disease. In two of the cases the symptoms were those of intestinal obstruction at the time when surgical aid was sought; and Kümmell[1] has also reported two in which the operation was undertaken in the first instance for the relief of ileus, and in which the condition of tubercular infection of the peritoneum was found when the abdomen was opened. In most cases of operation for tubercular peritonitis the operations have come under the obstetric branch of the profession, the condition having been mistaken for that of ovarian cyst, abdominal tumour, simple ascites, or found coexisting with disease of the uterine appendages; hence, although the disease is said to be more common in the male, the majority of the recorded cases which have been subjected to operative treatment are female. It is advisable to subject all cases to the test of microscopical examination, for it is possible to mistake for tubercular nodulations of the peritoneum the nodular formations occasionally met with in simple peritonitis. Mr. Keetley, in reading these cases, referred to the paper of Professor König, given at the recent Congress of Berlin. That surgeon had collected 131 cases in which operation had been done for tubercular peritonitis: of these, no less than 107 were left in a satisfactory condition when they were reported, 84 were said to be quite cured, and 30 were well two years after the operation. He also referred to a patient operated on by Sir Spencer Wells, who was alive last year, twenty-five years after the operation. With regard to the third case, two somewhat similar are mentioned by Dr. Bruhl,[2] in both of which, after death, eight months and eighteen months respectively after operation, no tubercles were found in the peritoneum.

CASE 1.—M. W——, a little girl aged four years, sent by Dr. Ball into the West London Hospital under Dr. Hood, July 1st, 1890. She had not been well for twelve months, during which time she had had whooping-cough and congestion of the lungs. Nine days ago she woke up one night screaming on account of abdominal pain. Bowels opened naturally next morning, but not since—i.e., for the last eight days. Vomiting began twelve hours after the pain, and has continued ever since. No vomiting of blood or mucus. One brother died of consumption, and one has had empyema. On admission, the abdomen was distended. From time to time the child cried a little and drew up her legs. The abdomen was marked by ridges and depressions as of distended intestine. On palpation there was considerable resistance; no apparent tenderness, no definite tumour. Resonant all over, except the left flank, which was slightly dull. No hernia. Next day the condition was unchanged, except that there was a small motion. In the afternoon Dr. Hood and Mr. Keetley consulted, and the latter performed an abdominal section by a median incision from below the umbilicus to near the symphysis pubis. The intestinal coils which presented were found to be much inflamed and matted together, the same condition extending in both directions. The finger introduced into the peritoneal cavity came upon universal adhesions, without any definite strangulation. There was some general roughening of the peritoneum, and on examination the peritoneal covering of both the intestines and the parietes was found to be studded with tubercles. The incision was then sewn up again in the upper half and lower fourth, two strips of iodoform gauze wet with sublimate (1 in 2000) solution were left in the opening (one extending into the pelvis, the other into one flank where the signs of peritonitis were most marked), a pad of wood wool and alembroth wool were applied, and the whole firmly bandaged. After the operation the child had repeated fæcal vomiting, four or five times between five o'clock and twelve midnight; she was very restless. Pulse 135, full to subnormal.

July 3rd.—Pulse 150, not so full; restless all night; vomiting fæcal still; patient retains nutrient enemata; has not retained enemata this evening excepting the last one, after which a pad and T-bandage were applied. No vomiting since 8 P.M.; delirious this evening.

4th.—No vomiting during the night, very slightly at 8 A.M., and twice since. Continued delirious through the night, but seems sensible since about 9.30 A.M. Enemata retained; bowels opened once naturally this morning, loose, but natural colour (not like returned enema). The wood wool pad is soaked through (though not the flannel bandage); it was changed this morning. This afternoon Mr. Keetley withdrew the idioform gauze drains, and approximated the aperture left in the abdominal wall with a harelip pin and silver wire; dressed with iodoform ganze and wood wool pad. Temperature up to 101·8°. This evening seems better; temperature 97·8°, feels cool; has been taking milk-and-water; no vomiting; bowels opened four times, two formed motions.

5th.—Slept a little better; temperature keeps down; pulse 120. Has taken milk during the night, and has been retaining it. Enemata have been taken well during the day; last evening the enema was not retained. No vomiting all day; pulse 120, full volume.

7th.—No vomiting since the 4th. She looks quite well this morning; temperature normal.

8th.—Continues to improve, and feels comfortable.

12th.—Stools now formed; takes food well. This evening she was not so well, slight vomiting of curdled milk; bowels open during the day. About 9 P.M. was very sick as before and complained much of pain in abdomen. Abdomen full; dressing removed. Temperature 97·6°; pulse 135, full; sloughing at site of harelip pin, which was removed, washed with sublimate solution; wound redressed. Dose of confection of senna given.

13th.—Bowels opened after senna; vomiting continues; rather collapsed this morning; very quiet. Temperature 96·8° (mouth); pulse 150, very small.

14th.—Wound dressed, looked much cleaner; pulse 170, very small; eyes sunken; vomiting continues.

15th.—Nutrient enemata not retained since last evening; vomiting not so bad; bowels opened this morning, 11 A.M., pea soup; nutrient suppository was ordered, and beef-tea and brandy by mouth; evening, pulse almost imperceptible; very restless; suppository not retained.

16th.—Died about 6 A.M.

CASE 2.—A little boy, Samuel H——, aged six years, was admitted into the West London Hospital on Sept. 9th, 1890. He had been taken ill the day before admission with abdominal pain and vomiting. Bowels opened twenty-four hours before admission. Was fairly well until about four months ago, when he had measles, followed by dropsy of the abdomen. The dropsy lasted about two months. He had whooping-cough about two months ago, and was fairly well until the onset of the present illness, which came on suddenly. The patient was seen by Dr. Ball. Abdomen hard and retracted; slightly tender; most so in umbilical region. He complained of some abdominal pain; there was no hernia or abdominal tumour.

Sept. 10th.—Vomiting continues, and is gushing; several enemata, with little or no result. No blood passed per anum. Abdomen as before. Rectal examination gave no definite result. No urine passed since admission; six ounces drawn off. Urine acid, 1020; very slight trace of albumen. 11 P.M.: Almost constant vomiting, which is now stercoraceous. No distension of abdomen. Temperature 97°. The patient had been given milk, at first with soda-water, afterwards with lime water. Also enemata of several kinds: first, a glycerine enema; secondly, a simple enema, with two minims of opium, every two hours and then enemata, every four hours, of milk, egg,

[1] Wien. Medicin. Wochen., February, March, 1888.
[2] Gazette des Hôpitaux, Oct. 23rd, 1890.

brandy, and tincture of opium; also linseed poultices on abdomen, and two minims of tincture of opium every two hours.

11th.—9.30 A.M.: After a consultation between Dr. Ball and Mr. Keetley, the latter opened the abdominal cavity in the middle line about midway between the umbilicus and the pubes. A coil of small intestine presented; it was injected, somewhat rough, and had lost its natural glistening appearance; it was studded with small tubercles, the surface everywhere presenting the same appearance. The mesentery was very thickly studded with tubercles. Mr. Keetley replaced the coil of exposed intestine, having first dusted it and both sides of its mesentery with crystals of iodoform; he then passed a strip of iodoform gauze moistened with sublimate (1 in 2000) down into the pelvis, leaving one end projecting through the abdominal wound; the wound was then closed at its upper part with harelip pins, and dressed with iodoform gauze and salicylic wool, strapping, and flannel bandages. The patient vomited in the afternoon after the operation; the vomit consisted of curdled milk, once very slightly, the second time considerably. He was taken out of doors in the sunshine for an hour and a half in the afternoon.

12th.—The patient has been fed every four hours since the operation with enemata of brandy, eggs, and milk; also one drachm of milk every hour by mouth. Since the operation the bowels have acted three times, consisting of enemata returned. The bowels acted four times on the day after the operation, and no vomiting took place. A teaspoonful of milk was taken by the mouth every hour. The temperature rose that evening to 100·4°, and then fell, never rising above normal after the second day. Convalescence was in all other respects immediate and uninterrupted, the little patient being comfortable, free from pain, with a good appetite, which was, however, only cautiously indulged. He was taken out every day. The strip of iodoform gauze was withdrawn on the sixth day, when the wound was dressed for the first time and a small rubber drain introduced instead for twenty-four hours only. Granulations springing from the fistulous opening thus left had to be touched with silver nitrate before complete healing took place. There is no tendency to hernia, and the patient wears no pad or truss. He looks fat and well. Two months after operation his bowels are regular, and his abdomen of normal appearance.

As the notes of Case 3 are also important they are subjoined. The case is that of Maud S——, aged eighteen, who was operated on two years ago by Dr. Venn, she having at the time a swelling or tumour of the abdomen. A small median exploratory incision demonstrated the existence of tubercular peritonitis. Every portion of peritoneum seen was studded with tubercles of different sizes and characteristic appearance. The opening was closed at once. The patient recovered, but neglected to wear any support, and engaged in some heavy work. A large hernia developed in the cicatrix, and Dr. Venn asked Mr. Keetley to operate on her for radical cure. The latter operation seems to have been successful; but the point of greatest interest about her case is that at the second operation not a sign of peritoneal tubercle was seen, though only about twelve months had elapsed since the same peritoneum was found studded with it.

Remarks by Mr. KEETLEY.—I am far from considering the relationship of cause and effect between the operation and the cure to be conclusively proved, at least with regard to a great number of the published cases of laparotomy, tapping, drainage, flushing, &c., for tubercular peritonitis. With regard to statistics, I have pointed out that we have no sufficient standard of comparison by means of which we can compare the operated with the non-operated cases, and also that those we have are open to the objections which lessen the value of all heterogeneous collections culled from the journals. Of course my own cases are far too few, and even the Göttingen clinic presents only fourteen; but as there are reasons, such as those furnished by the immediate improvement of individual cases, for giving credit to operative measures, let us assume for the sake of inquiry that they deserve this credit, and then ask how they can act beneficially. The bacillus tuberculosis is an organism acknowledged to be of delicate constitution, cultivated with great difficulty outside the body, rapidly killed even by such an agent as direct sunlight, and frequently perishing spontaneously in the human body. It is also well known that extensive tracts are seldom or never attacked by it—for example, the shafts of the long bones. We should not, therefore, be surprised to discover that there are regions of the body which, even though they may be susceptible to the attack of the bacillus, are not without means of spontaneously repulsing that attack. It is curious that, although children seem to be more susceptible to tubercle than adults, they far more easily get the better of it. This may be connected with the strength and activity of cellular life in them. The peritoneal cavity is one which with extreme readiness gives both ingress and egress to the active protoplasmic cells of the blood and lymph, to say nothing about "phagocytes." Dr. Bruhl reminds us in his paper[1] that the tubercle bacillus is not only sometimes far from tenacious of life, but that also tubercles in tubercular peritonitis are very superficially placed with regard to the peritoneum, being even, according to Rindfleisch and Colberg, actually on it, and not within its layers at all. If, therefore, leucocytes or phagocytes or chemical or mechanical agents introduced by the medical man can injure the tubercle bacillus and its products, surely here would be favourable conditions for their action. Again, we know that in joints tubercle is frequently cured by time and the powers of Nature, provided only the diseased parts be protected from irritation, and especially from the pressure of hard surfaces upon one another while in motion; there is little danger of such injurious conditions affecting the peritoneum, which is nowhere compressed between the two hard inextensible and almost inseparable surfaces. It must be remembered that rest can be obtained without either extension or absolute fixation. Fractured limbs get more rest in a swing than in a Macintyre's splint. Now, when a delicate plant, reared with difficulty, dies in a person's garden, he does not think it necessary to trace its death to some one agent which has killed it, and all its relations who have died in times past. So, bearing in mind the delicacy of the tubercle bacillus, and the reasonable probability, from the many facts now known, of spontaneous cure of peritoneal tuberculosis, that the peritoneum is not a place where it can always easily and permanently thrive and protect itself from the forces inimical to it in the body, we may be prepared to grant that even trifling disturbances, coming from either within or without, may kill the disease and its cause. To let out dropsical fluid may be to strike a blow by taking away a possibly favourable medium for the tubercle and its bacillus to grow in. To let in air may be another, though, as the tubercle bacillus is not an anaerobe, and as air even, in the case of an abdominal section, comes in contact with only a very small area of peritoneum, we must not attach too much weight to this idea. Dr. Lauenstein of Hamburg thinks light is the curative agent; but very little light reaches any except a very small area of peritoneum in any mode of operating. He relates one case quite recently treated on this hypothesis. It is necessarily inconclusive. The mere mechanical disturbance of the tubercles by the passage of the operator's fingers over them, or by flooding them with water, and even by the action of opposite surfaces rubbing against one another when the peritoneal cavity has been deprived of fluid and adhesions separated, may be injurious to the vitality of the bacilli, although it is generally regarded as favourable to infection. We must distinguish between infection and culture. The conditions favourable to one may not be so to the other. A plant may quickly take root and as quickly perish in one situation, and not readily take root and yet tenaciously survive in another. Moreover, the mere fact of being inoculated with a bacillus may be a protection to the sufferer against the ravages of the inoculated organism. It is conceivable that a human being or other animal may cultivate and attenuate a protective bacillus in his own peritoneal cavity, and profit by the culture himself. With regard to acknowledged germicides, I have said that König's collection of statistics show a greater success without their use than with it; but we ought to know more details before inferring too much from this. Look at the three cases here reported. The two in which iodoform and sublimate were used were incomparably more serious than that in which the abdomen was simply closed after the peritoneum had been exposed just sufficient for inspection. I am still in favour of the use of germicides, but the user ought to bear in mind how easily they can be abused, especially in young children.

[1] Gazette des Hôpitaux, Oct. 25th, 1890.

DEVON COUNTY ASYLUM.

EPILEPTIFORM CONVULSIONS DUE TO PACHYMENINGITIS HÆMORRHAGICA.

(Under the care of Dr. SAUNDERS.)

THE following case is interesting as an example of epileptiform convulsions commencing late in life, for which a definite cause, pachymeningitis hæmorrhagica, was found on post-mortem examination, and shows the frequently comparatively long duration of this disease and the interesting alternation of periods in which the most serious symptoms were present, and intervals of rapid improvement and comparative restoration to health. For the account of this case we are indebted to Dr. C. F. Bailey.

A. F——, a little, spare farm labourer, aged seventy-two, was admitted to the Devon County Asylum on Nov. 14th, 1889, suffering from senile melancholia. His previous history was that he had been a steady, hard-working man, and had only exhibited symptoms of insanity for one month. He now fancied that he had committed murder, for which he was about to be punished. There was no history of any apoplectic seizure, although he appeared to be a little weak on his left side. He had suffered from chronic bronchitis, had emphysema, and thickened arteries, but no anasarca or albuminuria. In a day or two he became quite satisfied with his position, his delusions left him, he conversed in a quiet sensible manner, and was soon afterwards transferred from the suicidal ward to a pleasanter one.

On Jan. 18th, two months after admission, the attendant (who had spoken to him as he lay in bed, only a few minutes previously, when he had seemed in his usual condition) found him at 7 A.M. in an unconscious state. When examined a few minutes later he was still unconscious, livid, breathing stertorously, pulse slow and full, extremities motionless and flaccid, pupils small, and the eyes deviating upwards and to the right. He gradually regained consciousness, but in the middle of the day the attendant stated he had "three epileptic fits in succession." Later on he had more or less recovered, and he then stated that he had become suddenly unconscious in the morning and remembered nothing. He had had no aura. He remained fairly well until March 30th, when he again had epileptiform convulsions. Afterwards he seemed feebler mentally, would begin a sentence, and forget words, and be unable to finish it until prompted with the words he wanted. There was no definite paralysis of his limbs, but he was generally weaker. On May 1st he had his third attack, and here, being under observation at the time, the convulsions were seen to be limited to the left side, the face, arm, and leg being all affected; loss of consciousness was not present, however. He had epileptiform convulsions on July 4th and again on Sept. 20th. He now, in this interval, began to have a tendency to spasmodic over-action of the left side of the face and twitchings of the left arm and leg, occurring more particularly when he conversed. His limbs were feeble, but more especially the left side, and he spent most of his time in bed. His intellect was rapidly weakening and he had delusions that people came into his room and molested him &c. On Oct. 6th he became quite unconscious, passing his urine and fæces involuntarily; face livid; body cold. His left arm was flexed and rigid; right arm flaccid. He did not regain consciousness, but died on October 8th at 7.15 A.M.

At the necropsy, which was made next day, a localised adherence of the dura mater to the calvaria was found over a spot about the size of a shilling in the right upper parietal region. On the under surface of the dura mater at this point was attached a flattened encapsulated hæmatoma, containing coagula of various ages. The cyst wall had ruptured, and blood coagula were present in the arachnoid cavity. The cyst had a smooth surface externally; its wall was fairly tough, and was not adherent to the pia mater. The surface of the brain was rather flattened on the right side, but the pia mater and brain otherwise presented no abnormal naked-eye appearance. The carotids, vertebrals, basilar, circle of Willis, and arterial branches were highly atheromatous.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Soot in Cells of Chimney-sweep's Cancer.—Suppurative Affections of Testicle and Epididymis.

AN ordinary meeting of this Society was held on Nov. 11th, the President, Mr. Timothy Holmes, being in the chair.

A paper was read by Mr. W. G. SPENCER on Soot in Cells of Chimney-sweep's Cancer. He said that, although chimney-sweep's cancer had been always ascribed to soot, and the skin of sweeps noted to be discoloured in a way which could not be removed by washing, yet the actual occurrence of soot in the growth had not been described. The present paper described the microscopical specimens shown, in which soot was seen to be contained in cells of the growth. The soot was shown to be present in the corneous layer of the epidermis, in the cells of the rete Malpighii, in the cells of the growing ends of the epithelial columns, and in the nest cells. Cells full of the same material were seen in the centre of the growth, at the deep margin, and in the tissues outside. He drew the following conclusions: 1. The presence of soot in the cells of the epidermis and in the tissues outside offered an explanation on the following points: the dusky patches in the skin of sweeps, the occurrence of cancer long after all contact with soot, the recurrence of the disease at a distance from the scar of the first operation, the primary chimney-sweep's cancer in the inguinal glands. 2. The cells containing soot in the tissues outside could be identified by their dark colour, and were seen to be scattered beyond the apparent margin of the growth. Hence the specimens emphasised by positive evidence the necessity of wide removal.—The PRESIDENT observed that less was seen now of this affection than when he commenced to practise surgery.—Mr. BUTLIN said he had been long engaged in studying the subject from a general point of view. The soot penetrated much deeper than was usually supposed, and Sir James Paget had shown that it became ingrained into the cells at the orifices of the glands, forming little black spots in various parts of the body. The author seemed to confound the occurrence of soot particles with the occurrence of cancer; it should be remembered that there was a wide difference between the two, for the soot probably only produced changes in the integument, which prepared it for the occurrence of cancer, and something else was required to develop the latter. Thiersch had stated that he suspected in cases of primary cancer of the inguinal glands the original cancer had been overlooked, but observers like Sir James Paget and Mr. George Lawson would scarcely have done this. If the growth were produced simply by the irritation of soot in the glands, something like lympho-sarcoma, rather than true cancer, should result.—Dr. DÉLEPINE did not regard the particles as soot at all. There was always a certain amount of pigment in the deep layers of the rete Malpighii, and it could be easily demonstrated if they were prepared in balsam simply. In many varieties of tumour it was not uncommon to find pigment in the deeper layers, and such pigment masses often found their way into the lymph vessels and glands. When the skin over a tumour was stimulated, then an increase of pigment was usually found in the deeper layers.—Mr. HULKE had read elsewhere an account of the histological examination of sections of chimney-sweep's cancer, in which carbonaceous particles were found deep down in the tissue. It was certain that the particles alone were not of very great moment. As the result of tattooing, which was usually done with finely-ground gunpowder, the axillary glands could be found crammed with pigment, and yet cancer never developed. He showed three drawings illustrative of chimney-sweep's cancer; two of them occurred in brothers, one grew from the leg and one from the thigh.—Mr. SPENCER, in reply, stated that in his paper he had carefully distinguished between pigmentation the result of unburnt carbon such as occurred in miners or coal porters, and that produced by soot. The changes wrought by combustion were exceedingly difficult of elucidation. He referred to the soot as the primary irritation, and the epithelial cells containing the pigment could be themselves carried to the lymphatic glands, where they might multiply, and produce epithelioma. In a negro's

skin cells containing pigment were equally distributed throughout, but in this case it was lodged in definite patches, and by daylight its colour was seen to be very different from normal pigment. The particles, too, had been unaltered by any of the chemical materials with which they had been treated. He could show tumours from animals, the "melanine" in which was easily distinguished from soot. In his case, again, there was no sign of pigmentation outside or between the cells such as one would expect to see if the cause had been hæmorrhagic extravasation.

Mr. A. M. SHEILD gave a communication on the Suppurative Affections of the Testicle and Epididymis. In his paper the causation of abscess formation in the testicle and epididymis was fully discussed. An attempt was made to show that when all the causes were considered, these cases were more common than was generally believed. The substance of the paper was mainly founded upon a perusal of the works in which the subject was treated of, articles in the various journals, hospital reports, and an inspection of specimens in the museums of the London hospitals. The occurrence of orchitis and abscess after enteric and other fevers was especially remarked, queries upon the subject having been addressed to the medical superintendents of each of the great fever institutions of this country. The influence of the tubercular diathesis would be fully considered, and also the occurrence of cases of suppuration complicating operations upon the urethra and bladder. The paper concluded with a short sketch of the treatment advisable, and was illustrated by several specimens.—Mr. BARWELL said that though writers in systems of surgery had not used the term abscess of the testicle, yet they often referred to fungating tumour of that organ, which he regarded as a condition following on abscess.—Dr. WILCOX said that suppuration of the parotid occasionally occurred after typhoid, and he asked whether in these cases of suppurative parotitis abscess of the testicle had been noticed to coexist.—Mr. SHEILD replied that the writers he referred to distinctly stated that testicular abscess was rare. Most of the cases of fungating tumour of the testis occurred by ulceration through the scrotum rather than by the bursting of an abscess from within. In the instances he had quoted of suppuration of the testicle occurring in typhoid parotid abscess had not been noted.

HARVEIAN SOCIETY.

The Expectant Treatment v. Operative Interference in cases of Tubercular Joint Disease.

A MEETING was held on Thursday, Oct. 16th, Mr. Thomas Bryant, President, in the chair.

Mr. WATSON CHEYNE read a paper on Expectant Treatment *versus* Operative Interference in cases of Tubercular Joint Disease. The paper appears in full in another column.

Mr. EDMUND OWEN thought that the Harveian Society might congratulate itself in having the present session inaugurated by Mr. Watson Cheyne. He was glad to find that Mr. Cheyne, who might almost be regarded as the biographer in England of micro-organisms, was standing up as a warm advocate of the expectant treatment of tubercular arthritis. British surgery until now had been too much under the influence of theories from German pathological laboratories, and he thought the publication of Mr. Cheyne's practical essay might do much to place the question on a more satisfactory footing. Only a few years ago one was half afraid to apply the word "tubercular" to a diseased joint, as it was tantamount to calling it "incurable." Surgeons had now ample and definite knowledge of the fact that if only the disease could be taken in its early stage and efficiently dealt with, it was absolutely curable. In the case of spinal caries, for instance, there was no doubt as to the general tubercular nature of the affection; but if only the child could early be kept at rest, the tubercular ostitis subsided and a complete recovery was obtained. So also in those cases of tubercular peritonitis which were dealt with by abdominal section, a considerable number of them got absolutely well. If so many children with tubercular disease of the spine recovered without operation, why should not the expectant treatment in tubercular arthritis generally have a full and fair trial? He particularly wished to raise a protest against the early stages of tubercular disease of the hip-joint being dealt with by excision, as was now a good deal advocated; cases of early disease were just those which gave the most satisfactory result to the expectant treatment. With reference to the association of phthisis with tubercular arthritis, statistics had been quoted to show that the lung disease more often followed the operative than the expectant treatment. This fact was probably to be explained by the worst cases having been selected for amputation and excision. This must naturally be the case. As regarded arthrectomy, some of his (Mr. Owen's) most satisfactory results had been in joints which had been associated with septic sinuses. In conclusion, he would ask Mr. Cheyne to say how far he considered tubercular arthritis to be dependent on the bacilli.

Mr. PARKER believed that after excision of the hip the subsequent malnutrition and stunting of the limb were often due to the disease which rendered the operation necessary, and not to the operation itself. Excision of the hip, in his opinion, should only be advocated when expectant treatment had been fully tried and had failed. When caseation was advancing and had gone beyond the stage suited for expectant treatment excision should be performed. When suppuration existed in the hip it was very unlikely that the head could be saved; it was therefore better in such cases to excise at once than to incise and drain.

Mr. BOWLBY would not advocate prolonged drainage after opening an abscess in connexion with the hip-joint. His usual practice in such cases was to open the abscess as soon as there was any evidence of its presence, by such a free incision as to render a drainage-tube unnecessary. He thought that it was only in a few cases that the joint was the source of constitutional infection, but that in general the tuberculosis was the result of pre-existing hectic, which caused a weakening of the system. In many cases, too, it would be found at the necropsy that there was some older tubercular lesion in the body than was found in the hip-joint.

Mr. ROGER WILLIAMS said that dry spontaneous cure of hip-joint disease was very rare, although such a termination was quite common in cases of pulmonary phthisis.

Mr. WATSON CHEYNE, in reply, said that he fully agreed with Mr. Bowlby that abscesses should not be drained, but that they should if possible be extirpated. In cases of suppuration occurring in the case of hip disease, it was better if possible to remove any sequestrum, and not to excise the head of the femur as a routine practice. Arthrectomy, he thought, was not suited for adults, and he preferred to remove the whole of the synovial membrane with scissors rather than to scrape it.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

THE opening meeting of the session was held on October 10th, when the President, Mr. H. E. ARMSTRONG, chose for the subject of his address, "The Preparation of Annual Reports of Medical Officers of Health," which he considered should, so far as circumstances permitted, be drawn up with more or less uniformity of plan, since they were not mere ephemeral productions, but ought to possess a permanent value as records of work done and as materials for reference in the future. They were also indications of the medical officer's conception of his duty, and as such involved no small amount of responsibility. He had for many years carefully studied and compared a large number of such reports by medical officers, urban, rural, and port, in this country, the colonies, and abroad. Many were excellent, but a large proportion were far from satisfactory. Some were meagre in the extreme, some seemed to have been compiled with the intention of flattering the self-esteem of the local authorities, and others were deficient in information respecting some of the most important matters bearing on the public health and in the lessons to be drawn from the statistical data. Among these omissions he would point to the frequent neglect of such questions as the water-supply in country places, food inspection, meteorology in reference to disease, the housing of the poor, and in rural districts of any evidence of the supervision of dairy farms, a matter not merely of local but of national concern as regards the population of the large towns supplied with milk from the country. The relations subsisting between the medical

officer and the inspectors, and the extent to which they coöperated in their work or acted independently of one another, called for fuller explanation than was usually to be met with, while he too often missed any statement of advice given or recommendation made to the sanitary authority, or of the results or neglect of such representations if offered. Some officers were content with a bare enumeration of the causes of deaths; these should always be reduced to rates per 1000, and all such as had any bearing on the sanitary conditions of the community should be tabulated in various ways, as sex, age, occupation, locality, and the deaths of infants from all causes being calculated on the births, not on the total deaths, or on the population, and deaths in hospitals analysed as those of residents and of strangers. Curve charts and other graphic representations of statistical and meteorological data and spot maps added greatly to the usefulness of a report. Where notification of infectious diseases had been adopted there was an opportunity for collecting and applying information of the utmost value, and the inspection and regulation of tenements and lodging-houses, and the inspection of public elementary schools, &c., offered a wide field of action to an energetic officer. After rapidly enumerating the special duties of Port Sanitary officers, Mr. Armstrong concluded with some hints as to the arrangement of the matter, and on the style and language of reports, deprecating above all things the practice of taking credit for a reduction in the general death-rate, and comparisons with other, perhaps dissimilar, communities.

MANCHESTER PATHOLOGICAL SOCIETY.

WEDNESDAY, OCT. 15TH, 1890.

G. A. WRIGHT, F.R.C.S., PRESIDENT, IN THE CHAIR.

THE President delivered an address, which consisted of a short sketch of the rise and progress of the Society (which is the oldest of its kind in England) and some remarks on the objects of a Pathological Society.

Dactylitis.—Dr. THOMAS HARRIS exhibited a girl with an unusual form of dactylitis. The girl was eighteen years of age, and the affection had been gradually coming on during the past two years. There was a very marked enlargement of the proximal and second phalanges of each hand, the proximal phalanges of the thumbs being similarly involved. The distal phalanges were unaffected. The proximal phalanges were in nearly every finger more enlarged than the second phalanges, they being increased to nearly twice their usual dimensions. The enlargement was nearly uniform and exceedingly hard. The extremities of two or three of the phalanges were somewhat elastic, but otherwise there was no evidence of softening. Over the lower extremity of the ulna of one side was a small rounded hard swelling, and a similar affection was present over the metacarpus. Three of the toes of the right foot presented a similar but less marked change to that seen in the hands. The patient had no pain except when the fingers were knocked. The dactylitis was considered to be due to congenital syphilis, but the family history and other indications of that condition in the patient were not conclusive. The patient was under antisyphilitic treatment, but this had not been persisted in sufficiently long to have any effect on the enlarged bones.

Addison's Disease.—Dr. DIXON MANN (the retiring president) showed some sections of semilunar ganglia, skin, and mucous membrane of the mouth from two cases of Addison's disease. The sections, prepared by Dr. Arthur Robinson, showed that the ganglia in both cases were normal, that the adrenals were in each case the seat of tubercular deposit, and that the skin and buccal mucous membrane showed pigment deposited in the lower layer of the rete and in the papillæ respectively. This pigment, Dr. Mann showed, was carried by cells which are at first attached to the walls of the bloodvessels in the corium; these, becoming detached, pass through to the rete; the cells of the rete being unable to take up the pigment, it lies there. An analogy was drawn between this process of pigmentation and that resulting from chronic inflammation; this led to a discussion of the adrenal function, in which Drs. Dreschfeld, Bury, and Robinson took part, Dr. Mann replying.

Professor YOUNG then showed a Tumour of the Testis, the microscopic sections of which, also prepared by Dr. Robinson, showed a peculiar inter-tubular cell growth and the presence of cystic cavities.

Amongst the card specimens were the Microscopic Results of a New Sugar Test, by Dr. Judson S. Bury; the Tuberculous Larynx of a Cow, and a Thoracic Aneurysm, shown by Dr. Harris.

Reviews and Notices of Books.

A Manual of the Practice of Medicine. By FREDERICK TAYLOR, M.D., F.R.C.P. London: J. & A. Churchill. 1890.

IT is no light task, in the present day, to produce a text-book of medicine which shall cover the ground in a manner adequate to such an exposition of the subject as shall enable the student to thoroughly comprehend the facts in which it abounds. It must be especially difficult to so sift the material as to avoid redundancy, and at the same time to retain conciseness and clearness of expression. All this, and more, it seems to us, Dr. Taylor has done most efficiently, for he has succeeded in preparing a work which no one can possibly regard as likely to encourage cramming, whilst he has contrived to compress his matter within smaller limits than are observed by the two most favoured text-books at present studied by the English student. There is in this manual a due sense of proportion between the various subjects of which it treats and a commendable accuracy in details. It would not be easy to single out any particular sections as showing more care or finish than others, and the exigencies of space forbid us entering upon an analysis of each separate part. Otherwise we might prefer to dwell at length upon the singularly clear description of the diseases of the nervous system which Dr. Taylor introduces into the volume immediately after dealing with the specific fevers. It must suffice to state that his account of nervous disease begins with descriptions of the affections of the nerves, cranial and spinal; then follow the diseases of the spinal cord, of the brain, and lastly functional disorders. The difficult subject of ocular paralyses is concisely treated, and is exemplified by a table showing the effects of the paralysis on each individual muscle. Next to the nervous system the diseases of the respiratory organs are considered. The section on phthisis is especially to be commended. In the sections on diseases of the heart there is an excellent and careful study of valvular affections, and an accurate description of malignant endocarditis. Then follow the diseases of the digestive system, then of the ductless glands, lymphatic system, and blood. After these come the diseases of the urinary organs, including the altered conditions of the urine (diabetes, &c.). Acute rheumatism and gout are dealt with in the following part, under diseases of the organs of locomotion; whilst a systematic description of diseases of the skin completes the work. We must congratulate the author upon having succeeded in producing a book which deserves to become a favourite with students, who will be certain to find its teaching reliable and sound.

The Rheumatic Diseases (so-called). By HUGH LANE, L.R.C.P. Edin., M.R.C.S., and CHARLES T. GRIFFITHS, L.R.C.P. Lond., M.R.C.S. London: J. & A. Churchill. 1890.

THE authors of this little work have enjoyed at Bath ample opportunities for the clinical study of the remarkable group of chronic articular diseases which are commonly termed "rheumatic," and the most interesting point elucidated in this volume is the distinction established between these affections, which differ somewhat from that generally admitted. Thus, in the first place, they

treat of chronic rheumatism, which they show is apt to develop in the young adult and in the aged, receiving characters special to each age-period. Stress is laid upon the concomitant affections in this class, such as lumbago, neuralgia, peripheral neuritis, sore-throat, &c. Rheumatoid arthritis is to be distinguished from chronic rheumatic arthritis, inasmuch as they assert the former, which is described in some detail, has no relationship to rheumatism. Involvement of the temporo-maxillary articulation is regarded as practically pathognomonic of rheumatoid arthritis. It is interesting to find the writers draw especial attention to the relation between the joints involved and the occupation of the patient, but we do not meet with mention of Mr. Arbuthnot Lane's views on this matter laid before the Pathological Society a few years ago. Considerable attention is paid to the constitutional symptoms of the disease. The importance of commencing tonic treatment early, and the advocacy of cod-liver oil and iron in this regard, together with hot baths, massage, &c., are the chief elements in treatment on which stress is laid. As to the relative advantages of Bath or Buxton, the authors speak with caution; and there is no doubt that there is room for discrimination of the type of case likely to be benefited by one or the other of these two favourite resorts, which differ in some important particulars. They consider that often great benefit results from a sea voyage. Osteo-arthritis, although treated in a separate chapter, is regarded as a later stage of rheumatoid arthritis. It is characterised by the development of lesions in the ends of the bones entering into the affected joints. Of rheumatic arthritis, which is separated from chronic rheumatism on the one hand and from rheumatoid arthritis on the other, the treatment is also tonic, with salicylates in the case of subacute attacks; and the value of forcible extension in some cases is illustrated. A shorter chapter on chronic gout follows. The leading points of difference between rheumatoid and rheumatic arthritis are drawn up in tabular form, and an analysis of 1200 cases is given, showing the joints affected in each variety of these so-called "rheumatic diseases." Although the book might have been prepared with more regard to systematic arrangement, we cannot but see in it an earnest attempt to make clear some of the most difficult points in diagnosis that confront the practitioner, and are proportionately grateful to the authors for this result of their labours.

Recherches Expérimentales sur l'Origine Microbienne du Tétanos. Par PAUL B. BOSSANO. Paris: Félix Alcan. 1890.

THE title of this *brochure* is at first sight somewhat misleading, as one expects to find that the author is here first describing a series of researches on tetanus. We find, however, that this is only partially the case; he has simply collected his own works and those of other investigators, and has made a synopsis of the experiments and results there recorded. The synopsis, though fairly complete, does not include the work of all who have written on the subject; and it is curious to find that not the slightest reference is made to work done by Salomonsen's pupils in Copenhagen. Nevertheless the work is valuable, and the note of the author's own investigations given in a short appendix is extremely interesting. In the analytical record and critical review the work is divided into three periods—first, that in which, without there being any experimental proof forthcoming, it was held that tetanus was an infective bacterial disease; second, that inaugurated by Nicolaïer in 1884, who proved that the disease was in some way associated with a bacillus which appeared to occur in the soil, and the presence of which he was able to demonstrate in the tissues in cases of tetanus accidentally or experimentally induced.

M. Bossano verified these experiments, and in his paper published in 1888 he showed that the disease was bacterial in its origin, but that the transmission of the virus by inoculation through several animals brought about its attenuation, and ultimately rendered it inoperative as regards production of the disease. A whole series of observers followed along this line, and a large amount of corroborative evidence, a record of which will here be found, was collected from his own and other papers. But it was not until Tizzoni, and Mlle. Cattani and Kitasato, independently, were able to separate the bacillus described by Nicolaïer, that any definite advance was made in the subject, and the third phase was entered on. Kitasato's observations, and those of Belfanti and Pescarollo, of the author, and of many other workers, have now, however, brought the subject up in line with other bacteriological questions, and the author is able in the last part of his paper to devote considerable attention to the morphological changes through which the tetanus bacillus is said to pass, and to the action of certain antiseptic substances, to both of which M. Bossano makes his contribution. But the really new work is condensed into four pages of an appendix, and in this is given a table showing the results of the introduction of soils from different countries into subcutaneous pockets made in various animals. He obtained soil from forty-three different regions, and of these twenty-seven gave positive results. In the case of specimens obtained from our own country, two out of three white mice died in about two days, with symptoms of tetanus, where soil from Bath was used. Two guinea-pigs were inoculated with soil from Portsmouth, but both animals remained alive. With soil from Plymouth, one of two animals died; and from Manchester, both guinea-pigs that were inoculated died. Similar varying results were obtained with the soil from other countries.

M. Bossano concludes that most tetanus bacilli are found in soils that contain a large quantity of organic matter; that the latitude or climate has little influence in determining the infective nature of the soil, which must be attributed to defective drainage and to bad hygienic conditions rather than to any special meteorological differences met with in the different countries.

OUR LIBRARY TABLE.

The Palliative Treatment of Incurable Cancer. By HERBERT SNOW, M D. London: J. & A. Churchill. 1890.—*On the Reappearance (Recurrence) of Cancer after Apparent Extirpation.* By HERBERT SNOW, M.D. London: J. & A. Churchill. 1890.—The first-named *brochure* comprises the text of a lecture delivered at the Cancer Hospital. In it Dr. Snow advocates the free extirpation of the axillary glands in cases of mammary cancer, the performance of gastrostomy in œsophageal cancer, and of inguinal colotomy in rectal cancer. For the treatment of "cauliflower" growths of the uterus he advocates the application of crystals of perchloride of iron. But the most striking of his recommendations is that in which he urges the induction of the opium habit in the subjects of malignant disease, and he supplies directions as to the best use of opium smoking. Here he seems to be treading on rather dangerous ground, but at the same time it must be admitted that if this practice is justifiable at all it can only be in those who are so unfortunate as to be the victims of a hopeless malady. In the other contribution Dr. Snow bases his argument on a thorough belief in the local origin of cancer in all its varieties, the systemic infection being secondarily induced through the lymphatics and bloodvessels; but he recognises also the existence of certain predisposing conditions, such as mental distress and worry, the advance of age, the effect of prolonged illness, and many other

factors. He does not, however, seem to lay much stress on heredity. To obviate the great tendency to recurrence, he advises the prompt removal of the primary growth and its neighbouring glands, and in doubtful cases he thinks an exploratory operation quite justifiable. After excision, he counsels the close observation of the patient for a period of two years. These recommendations can hardly be said to be novel, but it is well to have them insisted on, for they harmonise best with all that is known of the nature and progress of malignant disease.

Contribution à l'Etude de la Syringomyélie. Par Dr. I. BRUHL. Paris: Delahaye et Lecrosnier. 1890.—This monograph fills a distinct lacuna in neuro-pathology; for the condition of which it treats is undoubtedly one that often admits of diagnosis during life, and is by no means one of those pathological anomalies which are hardly to be recognised clinically. Dr. Bruhl has collected all the literature on the subject, and has added thereto some records of cases he has personally observed. One remarkable point which he proves is the frequent dependence of the dilatation of the central canal, or of the formation of new cavities in the substance of the cord, upon a new formation of a gliomatous nature, and it is this type of "medullary gliomatosis' which he has especially had in view. The leading clinical features of this interesting condition are the early appearance of disorder of sensibility, there being analgesia and loss of sensation to thermic stimuli, with retention of tactile sensation. When this remarkable severance of the various kinds of sensory impressions of which the spinal cord acts as the conductor is further associated with muscular atrophy, simulating progressive muscular atrophy, and with other disorders of nutrition, then a diagnosis of syringomyelia is justified. He considers that the anatomical condition is distinct from mere hydromyelia or simple dilatation of the central canal, and that it is a special lesion of the neuroglia, the new formation breaking down to form cavities. But he points out that the same series of phenomena are capable of being produced by a gliomatous formation in the centre of the cord, which has not undergone this excavation.

Synopsis of Lectures on Diseases of the Skin. By ROBERT J. GARDEN, M.D. Aberdeen: Bon Accord Press.—These are the headings of lectures delivered by the author at the Aberdeen Royal Infirmary, and his object is to present to his students in a convenient form the essentials of the subject, as regards classification, definition, diagnosis, and treatment, so that the lecturer gains more time for practical demonstration of cases, casts, and diagrams. This synopsis shows that the author has planned for himself a very complete course of lectures, and if in them he clothes these dry bones with an adequate covering, and supplements them with practical demonstrations, it is not his fault if the student does not gain a good insight into diseases of the skin. Students who have not heard the lectures will find the Synopsis useful as affording memoranda.

Diabetes. By ANDREW N. SMITH, M.D. Detroit: G. S. Davis. 1889.—A concise and accurate history of diabetes mellitus and insipidus, treated systematically from the clinical, pathological, and therapeutical standpoint. The author has made himself acquainted with the most recent ideas on the subject, and has produced a readable, if not highly original, book.

Transactions of the Eleventh Annual Meeting of the American Laryngological Association. New York: D. Appleton and Co. 1889.—The volume comprises full reports of the discussions on the various papers it contains. Amongst the most interesting topics are the subjects of "Septic Œdema of the Upper Air Passages," by Dr. Glasgow; "Some of the Manifestations of Syphilis of the Upper Air Passages," by Dr. De Blois; "Some Unusual Manifestations of Tuberculosis of the Larynx," by Dr. Rice; and "On the Local Treatment of Diphtheria," by Dr. Mulhall.

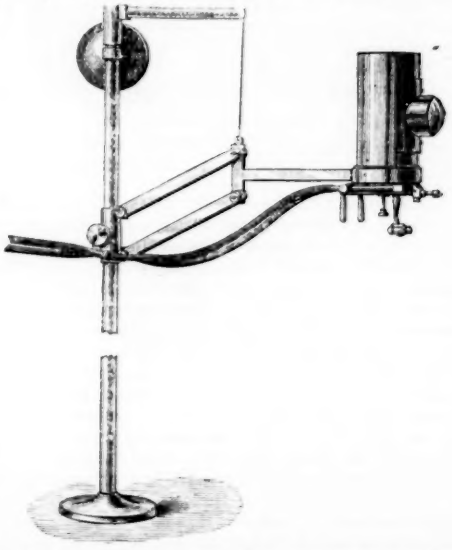
The Veterinarian.—The November number of this serial is devoted almost entirely to reports of the addresses given at the opening of the various veterinary colleges in London and in Scotland. They differ very much in character, as one would expect, but each is interesting in its own way, though it is probable that that of Professor Charteris dealing with the "holiday" subject would be most enthusiastically received. From the others the position of veterinary medical science in this country and the efforts being constantly made to improve it may be gathered. Following a number of extracts, a "Contribution to the Study of Parturient Fever of the Cow," by Professor Thomassen, Utrecht, Holland, is the only paper of any length on veterinary medicine; in it nothing very new is given, but a good *résumé* of the literature on the subject. The remaining pages are devoted to the reports of meetings of various veterinary associations. On the last page we find, under the heading of "Miscellanea," "The Doleful Ballad of Germs," which, in its way, is good—e.g.:

"Tuberculous germs in the goblet float—
With bacilli I know it swarms—
And germs in the mutton and beef I note,
In some of their protean forms."

New Inventions.

NEW LAMP FOR LARYNGOSCOPIC EXAMINATIONS.

FOR the satisfactory carrying out of laryngoscopic and rhinoscopic examinations artificial light is almost invariably required, and I think that most specialists will agree that the purest and best light is that furnished by the oxy-hydrogen limelight. I have recently had a limelight apparatus fitted up in my consulting room, which for convenience and simplicity of construction is, I believe, unequalled. It



consists, as will be seen from the accompanying woodcut, of an upright standard, which is fixed in the floor below and to the wall above. Sliding on this and adjustable at any height by a screw is the bracket for the lamp. Lateral movement is obtained by the rotation of the standard on

its pedestal. The upward and downward movement of the lamp is effected by means of a counterpoise contained in the hollow tube constituting the standard. The balance is so true that the lamp can be readily moved with one hand, and remains in any position without having to be fixed. Flexible tubes connected with the cylinder containing the oxygen and with a gaspipe convey oxygen and gas to the lamp. The metal tube for the oxygen is in the centre of the gas jet, and the flame is directed against a cylinder of lime. The chimney of the lamp is provided with a bull's-eye lens to concentrate the light. The inventor, who is an exceedingly able mechanician, has patented and placed the apparatus in the hands of Messrs. Arnold, of West Smithfield, who will give particulars about it. I shall be glad to show my light to any professional brother who may be interested in the matter.

Wimpole-street, Oct. 31st, 1890. F. DE HAVILLAND HALL.

THE HARVARD PHYSICIAN'S AND SURGEON'S CHAIR.

THE inventor of the "Harvard" has endeavoured to combine the capabilities of a chair for the physician, an operating table for the surgeon, and a couch for the gynæcologist, and has accomplished his object by producing a chair which can be easily put into a variety of positions by very simple mechanism, and adapted to almost any position of the body. Fig. 1 represents it in position as a chair, which may be tilted slightly backwards, rendering it suitable for operations on the mouth, throat, ear, or eye, or as a dentist's chair. It is also shown (Fig. 2) in a reclining position as a gynæcological couch or operating table, and being set upon a strong steel screw, it can be lowered or elevated from 29½ in. to 34½ in. simply by revolving it, and thus it is raised an inch in two revolutions. By the screw it can be rotated to the best point for light during examination or operation, and there easily fixed. As a gynæcological couch it is especially useful, and Fig. 3 represents it as for the dorsal position of the

FIG. 1.

FIG. 2.

FIG. 3.

patient, with the stirrups extended, which, when not in use, are turned back below the arms. While in this position the upholstered part of the seat can be removed, and below there is a tin tray which receives all discharges in operations. By a simple mechanism the head can be lowered below the level of the body, or the couch when extended can be inclined towards one or other side, and when towards the left and the patient on her left side, she is tilted into the best position for examination according to Sim's method. The arms can be very easily turned aside if found in the way during operations, taken upwards and fixed by the stirrups. In this way the upper part of the couch is increased in breadth.

We have had it in use for some time, and find that it is all the manufacturers claim for it. It is neat in appearance, the frame being of enamelled iron, the body of dark oak, and upholstered in strong leather. It can be easily and quickly manipulated to any position when the patient is upon it, and certainly we have not found any couch on which it is so easy to make a thorough gynæcological examination. As a rule gynæcologists in this country are satisfied with an ordinary couch or elevated sofa for consulting-room use, but the ease with which a patient is examined while in the semi-prone position on the "Harvard" is enough, we think, to commend it to every gynæcologist. To the general practitioner, or even to the pure physician, it must be useful, as the patient can be put in a semi-reclining position for thoracic or abdominal examination without the slightest strain. It is an American production, and is being largely used by our transatlantic *confrères*. It is manufactured by the Harvard Co. Canton, Ohio, and the agents in London are Messrs. Arnold and Sons, West Smithfield, E.C., on whose premises the chair can be seen.

Analytical Records.

COCA BYNIN: A COMBINATION OF THE ACTIVE PRINCIPLES OF COCA LEAVES WITH BYNIN OR LIQUID MALT.

(ALLEN AND HANBURYS, PLOUGH-COURT, LOMBARD-STREET, E.C.)

The idea of combining extract of malt with the extract of erythroxylon coca is, we think, a good one. It can be employed, under the direction of the practitioner, for the extemporaneous preparation of coca wine by merely adding it to ordinary wine to which patients are accustomed, and securing, at the same time it may be, an additional advantage by the presence of an active malt essence. Our experiments go to show the genuineness of the preparation. It rapidly liquefies starch jelly, and in a very short time completely converts it. When shaken with ether, the ether becomes tinged with green, which of course is due to the chlorophyll of the coca leaf. On evaporation of the ether a residue is obtained which is distinctly paralysing in its effect on the tongue. It yields also the characteristic needle-shaped crystals of cocaine hydrochlorate when treated with hydrochloric acid.

PATENT AERATED MILK (AFTER SEPARATION.)

(JOHN CRAMPTON, PATENTEE AND MANUFACTURER, STANSTEAD-PARK DAIRY, STANSTEAD, ESSEX.)

We confess that this preparation has excited in us no little amount of interest. Most will agree that milk when successfully aerated with carbonic acid gas will probably occupy a prominent place in the list of sick-room accessories. We have had full opportunity of examining these samples, which are the first of the kind that have been submitted to us. It is necessary apparently to abstract first a large portion of the cream by skimming. Then it is scalded by steam and subsequently charged with gas and bottled or put into syphons in the usual way. The samples kept perfectly sweet and uniform in composition in our laboratory for six or seven days, although the temperature was above normal. After that time the taste gradually grew cheesy and the solids separated. When quite fresh the taste was peculiarly smooth and creamy. Our analysis, it will be seen, corresponds with that of skimmed milk. Total solids, 9·71 per cent.; fat, 0·34 per cent.; mineral water, 0·08 per cent. We were disappointed to find that salicylic acid was present in small quantity.

CLOSE FISH.

(DAVID GOW, 7, PORT DUNDAS-ROAD, GLASGOW.)

"Close fish" probably are not so well known here in England as in Scotland. They are fish which have been

simultaneously cured and cooked by a special process. Mr. D. Gow of Glasgow evidently selects the freshest and finest of fish for this purpose. The flesh is firm, full, flaky, and of excellent flavour. They are sufficiently cooked to be eaten without the necessity of further preparation; or they may be simply warmed before the fire, affording at once a handy and appetising article of food, either for breakfast, tea, or supper. We have carefully examined the samples submitted to us for antiseptics, such as boracic and salicylic acids, and have not found the slightest evidence of its existence. We regard the "close fish" as an excellent article of diet.

INDIA, CHINA, AND CEYLON TEAS.

(THE UNITED KINGDOM TEA COMPANY, 21, MINCING-LANE, E.C.)

These teas are described on the list as No. 2, Congou and Assam; No. 3, Oopack and Cachar Assam; No. 4, Kaisow and Darjeeling; and No. 5, Choicest Ceylon and Finest Darjeeling. They vary in price from 1*s.* 3*d.* to 2*s.* per pound. We have examined them at some length. Chemical analysis, whilst affording a ready means of detecting adulteration in tea, scarcely enables one to judge of its quality, although the results exhibit some interesting relations in this connexion. The palate is the best judge of quality, and the quality, it may be taken, fixes the price. The Indian teas, it is well known, give tawny, rough, and thick liquors. They contain a high proportion of tannin, and are not suited for drinking alone. The teas of China are delightfully delicate in flavour and aroma, and they yield smoother and thinner liquors. The tea of Ceylon appears to occupy a position intermediate in character between those of China and India. These qualities are combined by the judicious and careful blending of the three varieties in such proportion as to yield the best results. We have determined the amount of tannin, mineral matter, soluble mineral matter, and the alkalinity of the mineral matter in terms of potash.

Description.	Mineral matter.	Soluble mineral matter.	Alkalinity.	Tannin.
No. 2, 1/3 per lb.	6·58 %	3·98 %	1·50 %	8·45 %
,, 3, 1/6 ,,	5·95 ,,	3·50 ,,	1·75 ,,	9·10 ,,
,, 4, 1/9 ,,	7·39 ,,	3·62 ,,	1·58 ,,	8·35 ,,
,, 5, 2/0 ,,	7·78 ,,	3·40 ,,	1·67 ,,	9·50 ,,

In the face of these results, no suspicion can arise of sophistication with spent leaves, sand, or mineral colouring. The presence of spent leaves would be indicated by a low proportion of soluble mineral matter and alkalinity; the presence of sand or mineral colouring by a high proportion of mineral constituents. The results are, in fact, just what one would expect to gain with genuine and carefully prepared teas. The yield of theine ranged from 2·53 to 3·79 per cent. It is curious to note that a larger quantity of theine (to which substance the beneficial and stimulating properties of tea are ascribed) is frequently found in the cheaper teas than is contained in the more expensive kinds.

FRANKFORT CLARET, STILL AND SPARKLING.

(J. FROMME, FRANKFORT-ON-MAINE, GERMANY.)

(BURGOYNE, BURBIDGES, & CO., 12-16, COLEMAN-STREET, E.C.)

Frankfort claret is made by the usual process of fermentation from the juice of the bilberry, which is better known perhaps as whortleberry. Its taste can scarcely be distinguished from that of a mild and sound ordinary claret, for which it is offered as a cheap substitute. On analysis, the following results were obtained. Absolute alcohol 7·00 per cent. by weight, 8·75 per cent. by volume; extract dried at 100° C., 2·82 per cent.; mineral matter 20 per cent. The sparkling claret resembles a sweet champagne, and is probably the still claret which has been submitted to an after-fermentation set up by the addition of syrup. It contains—absolute alcohol, 8·35 per cent. by weight, 10·35 per cent. by volume; extract (chiefly sugar), 12·90 per cent., mineral matter, 0·24 per cent. Frankfort claret affords a cheap and agreeable dinner wine.

PURE STERILISED ALPINE MILK CONDENSED WITHOUT SUGAR OR ANTISEPTICS.

(ED. LOEFLUND & CO., STUTTGART.)

This is a condensed milk prepared by the special process, and under the personal supervision, of Dr. Soxhlet, by which it is rendered entirely free from microbes and ferments. It is directed to add two volumes of water to one volume of the concentrated milk in order to obtain milk of ordinary strength. Our experiments are in accordance with this, as will be seen from the following results:—Fat, 9·66 per cent.; caseine and milk sugar, 26·07 per cent.; mineral matter, 2·27 per cent.; water, 62·00 per cent. The composition of the diluted product would be according to this: Fat, 3·22 per cent.; caseine and milk sugar, 8·69 per cent.; mineral matter, ·76 per cent.; water 87·33 per cent., which approaches closely to the composition of a milk of first-class quality. We have also confirmed the entire absence of cane sugar and antiseptics which are commonly used in the preservation of milk, but more particularly boracic and salicylic acids. It seems to us a pity that such an excellent product should be put up in metal cases. Milk, it is well known, invariably takes up metal, and the preparation before us is, from our experiments, no exception to the rule. The milk was perfectly fresh and sweet at the time of opening, and kept so for several days.

CHARCOAL WAFER BISCUITS.

(J. A. DONALD, 38, AMHURST-ROAD, HACKNEY, E.)

These biscuits, as articles of food, are not, from the nature of the active ingredient which they contain, very attractive in appearance, but they possess a flavour by no means unpleasant. Indeed, it would be difficult to say from the taste alone that they contained charcoal at all. There is, too, no objectionable feeling of grittiness experienced during mastication. They are adapted for use in cases of excessive acidity of the stomach.

HUSK BISCUITS.

(J. L. BRAGG, 14, WIGMORE-STREET, W.)

The general excellence of Mr. Bragg's biscuit preparations is now well known. He has recently added to his list a biscuit which is stated to be made from the husk of the best picked wheat. Our microscopical examination confirms this statement. They are of very pleasant flavour, delicately crisp, and contain a large amount of soluble dextrin, which points, of course, to efficient baking. The mineral matter is rich in phosphate. They are specially recommended for the use of those who are sufferers from chronic constipation and its attendant disorders.

MEDICINES SUPPLIED TO THE EMIN PASHA RELIEF EXPEDITION.

We have been asked by Messrs. Burroughs, Wellcome, & Co. to examine and report upon the condition of the contents of a large medicine chest which formed part of the medical equipment presented by them to the expedition, and which has just been sent back to England from the rear guard station at Yambuya, and to which allusion has been made by Lieutenant Troup in his interview with a New York Press representative. The interview was cabled to the London newspapers on Monday last, stating that the medicines at Yambuya were almost worthless, and those which were of any avail were insufficient in quantity. The chest, which is constructed of mahogany wood, and provided in the front with a lock and key, measures 18 in. in height, 8 in. from back to front when closed, and 12 in. across. It is fitted with a drawer at the bottom, 2½ in. deep. There is

a door on each side, either of which is furnished with nine compartments. The body of the chest in the front contains two drawers, occupying the whole width of the chest, and above these are three smaller ones. Over the drawers are five compartments, three of which contain bottles labeled in ink, thus: Syr. hypophos. comp., spirit. nitre dulce, and laudanum. "Burroughs, Wellcome, and Co." is printed on each. One of the compartments was found to contain some forty compressed tabloids, which on analysis proved to be potassium bromide. The first small drawer on the left contained a medical pocket-case, in which were five phials securely corked, in good condition, and to all appearance unopened, labeled aconite root valoid, belladonna leaves valoid, bryony valoid, nux vomica valoid, and gelsemium valoid. The second drawer from the left contained a case in which were eight small glass tubes, all numbered, and described as the Wyeth (compressed) hypodermic tablets: morphiæ sulphas, $\frac{1}{4}$ gr.; aconitia, $\frac{1}{100}$ gr.; cocaine, $\frac{1}{6}$ gr; morphiæ sulphas, $\frac{1}{8}$ gr., with atropiæ, $\frac{1}{100}$ gr.; morphiæ bimeconate, $\frac{1}{4}$ gr.; atropiæ sulphas, $\frac{1}{100}$ gr.; and digitalin, $\frac{1}{100}$ gr. They were all securely corked and full except the cocaine tube, which contained only two compressed tabloids. The words "Burroughs, Wellcome, and Co." were on every label. The case also contained a small glass pestle and mortar and an injector. The third small drawer held dental appliances, with a guide to the use of the solutions. In the large drawer immediately underneath the three small drawers were a pair of scales, a spatula, and measuring glass, all in fair condition. In the deeper drawer beneath this were a mortar and pestle, which had every appearance of not having been used, and in the compartments small glass jars, labeled podophyllin. calomel, and colocynth, quite full and unopened. Jars for iodoform and eucalyptine ointments and oxide of zinc ointment, both of which were empty; also bottles labeled valoid aconite, potass. permang. tablets (tabloids) (in perfect condition as shown by our testing), chlorate of potass. and borax tablets (tabloids), pil. morphia, $\frac{1}{8}$ gr., pil. calcii sulph., $\frac{1}{2}$ gr., and pil. opii, 1 gr.; all in excellent condition and unopened, the stoppers being secured by a piece of leather tied on. The large drawer at the bottom of the chest contained a case of tape plaster, two bottles of Sprudelsalz, about one half full, some lint, and a book containing directions about the drugs. In the compartments of the left door were bottles of potassium iodide tablets (tabloids), 5 grs.; pil. phosph. iron, quin., and strych.; quinine tablets (tabloids), 2 grs.; compressed soda-mint tablets (tabloids); eucalyptine, pil. ergotin, and pil. cholera. The stoppers were secured by leather tied down over them. All the bottles were quite full and the contents in an excellent state of preservation. In the compartments of the right door were the following: Pil. quinia co., pil. hydrarg. (blue), 5 grs.; pil. cathart. co. (U.S.P.), pil. colocy. co. et hydr., pil. rhei comp., cathartic comp., pil. laxative, vegetable and peptonic tablets (tabloids). These were all full, in good condition, and apparently unopened. The stoppers were tied down with leather. At the back of the chest were five compartments, fitted with a sliding lid, containing an enema tube by Arnold and Sons, and several loose glass tubes quite full of compressed tabloids. They were labeled: "The Wyeth (compressed) hypodermic tablets (tabloids), morphiæ sulphas, $\frac{1}{8}$ gr. Prepared by Burroughs, Wellcome, and Co., Snow-hill, London."

We have taken out several of the above concentrated drugs, and have submitted them to analysis. The following are our results:—

Potash Iodide Tablets (Tabloids), 5 grs.—The tablets were very slightly damp, but were little impaired on this account, as they were found to contain, according to our analysis, 4·869 grs. of the iodide.

Morphiæ Sulphas, $\frac{1}{8}$ gr.—From six of these we obtained 0·8028 gr. of morphia. This corresponds to 0·167 or $\frac{1}{5}$ gr. of the sulphate in each tabloid, assuming the composition of the salt to be represented by the formula $(C_{17}H_{19}NO_3)_2\ H_2SO_4,\ 5H_2O$. The morphia so obtained gave excellent reactions with perchloride of iron, iodic acid, and Frohde's reagent.

Quinine Tablets (Bisulph.) 2 gr.—From one tabloid we succeeded in extracting 1·114 gr. of quinia, which is equivalent to 1·97 gr. of the bisulphate, the composition of which we take to be expressed by $(C_{20}H_{24}N_2O_2)_2\ (H_2SO_4)_2\ 15H_2O$. Another tabloid yielded 2 gr. bisulphate. The quinia so obtained exhibited all the well-known reactions—fluorescence &c. The compressed tabloids were very bitter to the taste.

Pil. Hydrarg. (Blue), 5 gr.—From one pill we obtained 1·3 gr. of metallic mercury.

Pil. Phosph. Iron, Quinine, and Strychnine.—When these pills were crushed they were seen to glow strongly in the dark. This affords a very strong proof of their perfect state of preservation, as phosphorus is, it is well known, very readily oxidised. Quinine, strychnine, and iron were successfully extracted, as evidenced by the well-known striking tests.

Spiritus Etheris Nitrosi.—This was colourless and perfectly clear. Carbonate of soda gave little or no effervescence. Sulphate of iron and sulphuric acid resulted in the production of nitric oxide.

Laudanum.—Morphia was readily obtained from this, as proved by the application of the characteristic tests.

Borax and Chlorate of Potass. Tabloids.—These were shown to contain both ingredients by distinct reactions. They were in a good state of preservation. The same may be said of the permanganate tabloids.

Cocaine Tabloids.—Cocaine was evidently present from the numbing effect experienced when the tabloid was allowed to dissolve on the tongue.

Aconitia.—These tabloids were characterised by a sharp, tingling taste.

Pil. Quinia Co.—Quinine was readily extracted from these.

Pil. Morphia, $\frac{1}{8}$ gr.—Morphia was obtained from these pills by treatment with slaked lime and pure alcohol. The alcohol on evaporation yielded the pure alkaloid.

ENTERIC FEVER IN INDIA.

To the Editors of THE LANCET.

SIRS,—It is perhaps well that attention should again be drawn—as is done by Surgeon Sherman Bigg, in his letter on page 882 of your issue of Oct. 25th—to the fact that more diseases than one are returned in India as enteric fever. I cannot agree that there are "two varieties of enteric fever," but believe rather that another disease is sometimes (perhaps frequently) mistaken for enteric. Malarial fever (so-called remittent) does occasionally so simulate enteric fever in its course and symptoms as to be with difficulty distinguished except post mortem, when the absence of the characteristic lesions in Peyer's patches is conclusive. Whilst agreeing with Surgeon Bigg that these cases should be classed apart from enteric fever, I cannot think that it would be wise to introduce the term "enteroid," which might only serve to delay the differentiation in the same way that the term "typhoid" seemed to imply a connexion with, rather than a difference from, "typhus." In some papers on the subject[1] I had sought to restrict the term "typho-malarial fever" to these cases, but seeing how this term is used by different writers in reference to many various conditions, it might be well to let it lapse, and to return the cases as "enteric fever," or as "malarial (or remittent) fever," as the case may be. These non-enteric cases cannot be due to "sudden atmospheric changes of temperature," since the febrile disturbance may continue for weeks or months. There can be no doubt that the term "enteric fever" should be restricted to the specific disease which, in Surgeon Bigg's words, "owes its origin to some sewer metamorphosis"—I am, Sirs, yours obediently,

J. EDWARD SQUIRE, M.D. Lond., M.R.C.P.

Harley-street, W., Oct. 30th, 1890.

[1] Enteric Fever at Suakin, Med. Chir. Trans., vol. lxix., 1886. Typho-malarial Fever, Epidemiological Soc. Trans., 1886-87. Typho-malarial Fever, Internat. Med. Jour., 1887.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 15, 1890.

THE annual meeting of Fellows and Members at the Royal College of Surgeons of England, held on Thursday, the 6th inst., was remarkable for the exhibition, if not of actual signs of conversion on the part of the conservative element in the Council, at least of symptoms of divergence of opinions within the ranks which foreshadow surrender at no distant date. It had been feared by the friends of reform and anticipated by its enemies that the slow rate of progress which has characterised the movement hitherto would so dishearten the attacking forces that they would either be abandoned by leaders of position and influence, or gradually dissolve until they became an insignificant band carrying on a desultory guerilla warfare. Nothing of the kind has occurred or is likely to occur. The meeting on Thursday showed an undiminished interest in the amendment of the constitution of the College, and if all the old leaders did not take part in the fray new leaders came to the front, and a very effective onslaught was made upon the *status quo ante* maintained by the Council.

The address of the President dealt entirely with such matters as the enlargement of the College premises, details concerning the library and museum, educational changes, the reconstitution of the University of London, the Midwives' Registration Bill, and the encouragement of scientific research within the walls of the College and rooms connected with the Examination Hall. All the controversial subjects which the Fellows and Members had assembled to discuss were omitted, and after a reminder that the College is dedicated to science of the higher kind, and not to politics, an exhortation was given to the Fellows and Members to keep out all political thoughts, ways, and actions, for they are not always constructive. At the conclusion of the President's address, the Secretary read the following resolution, of which notice had been given:—

"That this meeting of Fellows and Members of the Royal College of Surgeons of England, having considered the report of the Council dated Oct. 9th, 1890, is of opinion that immediate steps should be taken to forward the introduction early in the next Parliamentary session of a Bill to amend the constitution of the College so as to secure to the Members a just representation in and upon the governing body of the College. This meeting further expesses its deep regret that the Council has as yet shown no disposition to meet the wishes of the Fellows and Members in spite of their repeated protests."

In moving this resolution, Mr. LAWSON TAIT, who made his *début* at a College meeting, very effectually and happily disposed of the omission in the President's address of the controversial matters which were uppermost in the minds of the assembled Fellows and Members, as well as the President's deprecation of the introduction of College politics, or the affairs of the College community or constituency, and he contended that a body like the Fellows and Members had an inalienable right to be consulted on such questions as the extension of the medical curriculum to five years, the reconstitution of the Colleges of Physicians and Surgeons for the purpose of conferring medical degrees, and the exclusion of the Society of Apothecaries from the Conjoint Scheme. The want of trust in the constituent body on the part of the governing Council was one of the most serious indications of a defective organisation at the College. Both Mr. LAWSON TAIT and Mr. JOSEPH SMITH, who seconded the resolution, complained of the want of courtesy and consideration shown to the Fellows and Members by the Council, who had taken no notice whatever of the resolution passed at the last meeting, and the latter gentleman made a pointed reference to Members of the Council whom he saw present, who were formerly reformers. After Sir MORELL MACKENZIE had given a characteristic summary of the achievements of the Council, Sir WILLIAM MOORE pointed out a blot which would be certainly remedied if the Members of the College were represented on the Council—the neglect of the interests of the public medical services; and said that the conduct of their College contrasted unfavourably with that of the Colleges of Surgeons of Edinburgh and Ireland. His dislike to the extra-collegiate action of the Members of the College is undoubtedly shared by many Fellows and Members favourable to the claims of the Members of the College to representation. Such action might, perhaps, have been avoided in the first instance, but it is difficult to see that any other course is now open to the Members, since there appears but little indication of any desire on the part of the Council to enter into negotiations with the Members with a view to a termination of the present unfortunate condition of affairs. Just as the discussion seemed likely to come tamely to an end, Sir SPENCER WELLS imparted fresh interest by rising to break the silence which usually pervades the ranks of the Council on these occasions. The gist of his remarks was that the Council could not be expected to carry out a resolution passed at a general meeting when they disapproved of its terms, but they were anxious to ascertain the opinions and wishes of Fellows and Members, and a deputation like that recently received was the best method of procedure. He also read opinions from Lords BRAMWELL and SELBORNE favourable to the view that the Council has power to call meetings of Fellows only if they desire to do so. This speech naturally brought up an experienced debater like Mr. HOLMES, who at once fastened on the weak points of Sir SPENCER WELLS' speech. Whilst congratulating the Council on their willingness to receive a deputation, and departing from their policy of doing nothing, he acutely said that he could not understand how, if the opinion of a general meeting was to be treated as worth nothing at all, the opinion of a deputation from the same meeting could be considered likely to afford the Council any assistance. Mr. TAIT having replied, the resolution was put to the meeting, and carried by a very large majority. Before the meeting terminated the President stated that Sir SPENCER WELLS expressed his own views only and not those of the Council. However this may be, it is quite certain that there is a considerable and increasing element in the Council favourable to a settlement of all the questions in regard to which

the Council and the Fellows and Members are at issue; and it would be no matter of surprise to us to find the Council giving way under a continuance and increase of the existing pressure. The leaders of the movement for the amendment of the constitution of the College are strong, persevering, and thoroughly in earnest, and in a little while will have a force behind them which the Council will not be able to withstand.

THE existence of a large number of ignorant and untrained midwives has long been felt to be a disgrace to this country, and a veritable cause of death and suffering to poor women. In connexion to a great extent with a bad recent instance, in which five or six lying-in women died within a few weeks, a demand for legislation was raised. Many such demands had been made before, at the instance or with the support of the General Medical Council, but from some cause or other had failed. Last session a Bill was introduced and sent to a committee for amendment. An innumerable host of amendments to this Amended Bill were put on the paper, and the passage of the Bill was stopped. This is not altogether to be regretted, as such a measure needs much consideration. In such a matter "raw haste is sister to delay," and as much harm as good may easily be done. But for the first time in the history of this question there is a disposition in some quarters, notably in Liverpool, to denounce all legislation on the subject, on the ground that it will give legal status to midwives on insufficient grounds, to the detriment of the profession and to the injury of the public, and especially of the poor. Dr. RENTOUL and Dr. BENNETT have both written to us in this sense. Dr. BENNETT, in a letter to us,[1] writes as if it were proposed to admit "a horde of obstetric 'Gamps'" to the Medical Register, which, of course, has never been thought of. As the climax of his letter he puts two questions to the members of the profession who have the temerity to support this Bill. First, what interest have they in its success? Secondly, would they place their wife, sister, or daughter in such hands? These questions are not so strong as they were meant to be, and admit of the easiest answer. The answer to the first is that medical men have no personal interest in promoting legislation to secure a certain amount of training and education in midwives. It is pure humanity that leads them to support a Bill that will forbid any woman henceforth to call herself a midwife without a certain amount of ascertained training and fitness for the duty. They see the coarsest injuries done to parturient women, and they wish to reduce such injuries to a minimum. The answer to the second question is still more simple. Medical men would not commit their relatives to any midwife, for they have the sense and means to employ a qualified medical practitioner. But if they were in the position of the poor, they would infinitely prefer to commit their relatives to a midwife who had been trained in a hospital under the supervision of medical men than to a "Gamp." Dr. BENNETT would do the same. We challenge him to deny this. This answer is unanswerable. The question is not as between midwives and medical men, but as between ignorant and often drunken women and women with a certain guarantee of character and qualification. It is not as if we were starting afresh, or as if we had not already on hand midwives. They are everywhere, acting without let or hindrance. Legislation proposes to "let and hinder" them. The letters of Dr. AVELING and Mr. HUMPHREYS in our impression of Nov. 8th are a sufficient answer to the objections to legislation, and, we cannot doubt, express the general opinion of men who have seen the misery and mischief of ignorant midwives' midwifery, probably not over-estimated by Mr. HUMPHREYS at hundreds of deaths a year.

[1] THE LANCET, Nov. 1st.

We cordially agree with the objectors that it would be better that all parturient women should be attended by medical practitioners, and we would encourage everything in medical education that will mark the distinction between a mere midwife sharply restricted to ordinary physiological labour, and a medical practitioner qualified in the three branches of medicine, surgery, and midwifery. But it is impossible that all women should have medical practitioners. In Ireland the majority of the lower classes are attended by midwives; and even in England and Scotland it is notorious that a large proportion of cases are so attended, and it is almost inevitable that they should be. Not only so: in the Poor-law infirmaries, and with the sanction of the Local Government Board, midwives are largely employed under the supervision of the medical officers of the institutions. If this opposition is carried much further, it is more likely to end in the creation of a lower class of general practitioners, male and female, more degrading to the profession than the creation of a class of mere midwives can be.

There is another point. Have Drs. RENTOUL and BENNETT considered the fact that already there are numerous sources of diplomas and certificates in Midwifery from which licences by scores or hundreds annually proceed? The Obstetrical Society has an increasing demand for its diploma. The Lying-in hospitals give certificates. The Royal College of Physicians of Ireland does not consider it beneath its dignity to have regulations for the admission and examination of female candidates for the diploma of midwife and nurse-tender, exacting a six months' course of systematic lectures on midwifery and attendance on bedside instruction in a lying-in hospital. Both the Obstetrical Society and the Irish College require from successful candidates for their diploma declarations of submission to certain conditions, and to their discipline in the event of misconduct. These bodies are acting individually, and some of them without legal sanction. It is idle to argue as if they were not doing so. The medical profession is not likely to be ruined by the existence of respectable midwives for a limited purpose; and we do not think its interests served by those who would advise it to an undignified opposition. Let the strength of the profession and of its Obstetrical Societies be spent in defining the limits of function in midwives, and in securing their restriction thereto.

A CORRESPONDENT writes to us to warn travellers in Switzerland, Italy, or the French Riviera regarding the dangers which may await them if they should fall ill by the way and be in sudden need of medical aid. According to

the story of our correspondent, a member of his party was suddenly attacked by illness at Lucerne, and on applying to the landlord of the hotel for advice regarding the choice of a physician, they were assured that there was no English doctor practising in the town. A foreign medical man was summoned, under whose treatment the patient did not improve. The anxiety of the friends led to further inquiries, when it was discovered that there was an English doctor who had been practising in Lucerne for six years. He was accordingly brought in to take charge of the case, and the patient made a good recovery. Our correspondent believes that in this and many similar cases of which he has knowledge the hotel keepers recommend individual practitioners to English visitors, to the exclusion of English practitioners, and he suggests that in such emergencies some more trustworthy source of information should be sought, such as the English chaplain.

We think the question is well worthy of a little consideration, although we must wholly demur to the implied minor premiss in our correspondent's argument—viz., that foreign practitioners in the various health resorts are ignorant or incompetent. The contrary is to our own certain knowledge the actual fact. The country practitioners in Germany and Switzerland are well-qualified men, considering their position; and at some of the French and Italian resorts may be found men of undoubted talent and of European reputation. While this is true and should be ungrudgingly admitted, there is much to be said in favour of English people travelling abroad being attended, if they so desire, by their own countrymen. There is first the difficulty about language, which is rarely quite surmounted. Our countrymen are only moderate linguists, and those persons who can speak French, German, or Italian without some embarrassment constitute a very insignificant minority. As regards foreigners, German medical men often speak and write English with remarkable correctness, but this is rarely true of Frenchmen or Italians. It is not rare to meet with practitioners at the various resorts who undertake to speak English to their patients, but who only succeed in bewildering them. Even where each party has a fair knowledge of the other's tongue, it is often found that the technical terms of disease are unknown or forgotten, and that a thorough mutual understanding is difficult to attain. We know how hard the average patient finds it to describe accurately and intelligently the symptoms and history of his ailment. Add even a slight linguistic impediment to his task, and his difficulties are multiplied tenfold.

Apart from the question of language, there are other grounds why an English patient may not feel thoroughly comfortable and satisfied in the hands of even a most competent foreign practitioner. There are such things as national constitution and national therapeutics. Just as the dietary suitable for a Spaniard or an Italian may prove injurious to the Englishman, so foreign methods of treatment may require modification when applied to an inhabitant of these islands, and it is only a small number of foreign practitioners who have had any opportunity of acquiring a practical knowledge upon such a difficult and obscure subject. There is no doubt that our general management of disease, being based upon experience gathered almost exclusively from practice among people of the same or allied blood, has peculiarities of which we are hardly conscious, but which our patients are keenly alive to, especially when any change is attempted or any novel methods tried. The racial peculiarities with regard to disease are most numerous and striking, and although most marked with regard to such diseases as yellow fever, small-pox, or leprosy, are probably of very wide range and great importance.

The question arises how English travellers may be best enabled to find their own countrymen of the medical profession in the various localities. We are not aware of any authoritative list, except that contained in the Medical Directory, which is not always available to the ordinary lay traveller. The lists given under the various resorts in the special edition of BRADSHAW'S foreign guide are useful, but very incomplete. Many of the very best names are absent from them. The information given in many guide-books is biased and inaccurate. What is wanted is a full list, brought thoroughly up to date, of all the British practitioners resident in the various foreign resorts usually requented by our countrymen. Such a list should contain simply the names and addresses of the practitioners, with their qualifications and the dates at which they were obtained. There should be neither note nor comment on the part of the editor of such a list, and all puffery, which is so repugnant to good taste and so dishonouring to the profession, should be rigorously excluded. We have no doubt that a little manual with such information would meet a real want, and would have a ready sale, becoming possibly in time an indispensable adjunct to MURRAY or BAEDEKER. It would be expecting too much of human nature to look for perfectly unbiased information from hotel keepers on such a topic. We must remember that it is not their selfish interests alone which come into play, but their national feelings and prejudices. Nor can we agree with our correspondent that the English chaplain would be in all cases a perfectly satisfactory source of information. He is in most cases a bird of passage at foreign resorts, with a very scanty knowledge of the place It would be in every way more satisfactory that the traveller should have available some authoritative list, carrying its own evidence, and capable of being interpreted by any person of ordinary intelligence.

AN outbreak of enteric fever due to specific contamination of milk is reported by Dr. ASHBURTON THOMPSON as having occurred at Waverly and Randwick, near Sydney in New South Wales, and some of the circumstances connected with the outbreak indicate that the interests of the public, compared with those of dairymen and milk purveyors, are held in higher esteem in this Australasian colony than they have hitherto been in this country, where so-called trade interests are brought forward to prevent legislation that is much needed in order to secure due protection of the public from preventable disease. Notice having been given to the Central Board of Health, under the Dairies' Supervision Act, to the effect that there was suspicion that disease was being distributed by means of milk, an inquiry was set on foot by Dr. ASHBURTON

THOMPSON, the results of which are set out in a very detailed form. Briefly stated, it appears that, out of 2223 inhabited households where inquiry could be completed in the two districts, cases of enteric fever had occurred in 102, and investigation as to the sewerage and drainage and as to any common water-supply showed that these could not have brought about the epidemic which prevailed off and on from October of last year to May of the present year. Milk-supply was next considered, and it was found that the incidence of the epidemic in houses receiving their milk from one source amounted to 35 per cent. of the houses supplied, whereas it was only 2 per cent. as regards houses supplied by other milk vendors. These data seem to cover the whole period, when secondary infection would have had time to come into operation and to have induced disease from other than the one primary cause. Inquiry was next made as to the general local sanitary surroundings of the houses supplied from the suspected dairy; but there was nothing by which they could be differentiated from the houses which did not suffer, and thus the case against the milk service in question was very strong indeed. It was made still stronger when it was ascertained that in other townships within the milk service households receiving this special milk had also been invaded. The cause of the infection of the milk also seemed to be clearly traced. A well was on the premises which was liable to pollution, and, as the general water-supply was by meter from the public works, there was a temptation to use the well water, and an effort was hence made to close it. But it remained open until March of this year, when it was at last closed. Before this was done, three cases of enteric fever occurred among the dairy staff between November and January, and a lad who was vending the milk admitted, when it was seized, that it had been diluted with water.

Coming next to administrative questions in connexion with this epidemic, we note that the Colonial Government do not deal as tenderly with the implicated milk vendor as we have been in the habit of doing at home. When such circumstances have arisen in this country the name of the implicated firm is never mentioned in an official report; indeed, where possible, an effort is made to prevent the dairy from being identified. But both the President of the Board and the Superintending Health Officer in New South Wales distinctly name the owner of the offending dairy again and again, and this in connexion with certain "disgusting" conditions affecting his premises; and the resulting loss of trade cannot fail to have been considerable. Lists of customers were also required of the dairyman at the onset of the inquiry. And it is also evident that the owners of dairy farms whence enteric fever is capable of being disseminated through the agency of the milk service are looked upon as distinct enemies of society. The President of the Board, in a memorandum prefixed to the report on the offending dairyman's premises and on the outbreak generally, points out that such outbreaks are a great burden on the public. Not only do they involve much loss and suffering, but a heavy pecuniary charge results from the necessary hospital care and treatment; and all this is in addition to the consequences of the death of individuals. Having regard to these considerations, the President asks that there may be increased stringency in the action taken under the Colonial Dairies Act; and with a view of securing due publicity to these views and to the circumstances elicited as the result of the inquiry on which the views are based, the whole documents with the report on the outbreak were ordered to be printed by the Legislative Assembly. Last session of Parliament there was much opposition at Westminster to any further "interference" with the milk trade, and thus far the efforts made to secure the prevention of mischief through the agency of milk have been but imperfectly achieved. The precedents available in some of our colonies and in other parts of the civilised world may have to be called up in aid of the protection of the public, unless we can secure a loyal coöperation between the "trade" and the health officials in satisfactorily tracing outbreaks of disease to their proper sources.

Annotations.

"Ne quid nimis."

LIFE ASSURANCE AND THE MEDICAL PROFESSION.

IN accordance with our purpose already announced we to-day present our readers with the results of a full inquiry which we have been making into the requirements of medical practitioners in the matter of life and accident insurance, and the facilities which the various Offices transacting business of this class have provided for meeting these requirements. In most instances our inquiries have met with a very cordial response. To the very numerous readers of THE LANCET who have given us the results of their experience, and enabled us to state the needs of the profession in this respect with a fulness that has never heretofore been attained, we are in the first place indebted. And among these we must particularly mention our correspondents in various localities who have most warmly supported our efforts. From their local inquiries it has been made clear that the practice of medical men in different parts of the country with reference to the assurance of life varies very greatly. In some parts a large proportion—placed by our correspondent in one northern town as high as 95 per cent.—are insured, while in other parts the proportion does not exceed 50 per cent. Such discrepancies point to what in the less-favoured localities can hardly be less than a great and strange neglect of a pressing duty. We trust that the attention drawn to the subject by our Supplement to-day will lead, in not a few cases, to the repair of this fatal neglect. On the other hand, our thanks are due to the directors and managers of the various Life Offices who have contributed to our materials. It will be seen that we have succeeded in eliciting some very important information and some valuable concessions. The subject is in a sense perfectly new, and it is nowise surprising that this first attempt to bring the medical profession and the insurance world into touch with one another should bring to light some want of adaptation of the scheme elaborated by the one to the exact wants of the other. We are glad to think, however, that our inquiry has already had the effect of putting the whole subject in a new and clearer light, and we hope that in the result the discussion thus commenced will lead to considerable improvements in the practice of the Insurance Offices; and, on the other hand, to a greatly increased use of their improved facilities by members of the medical profession.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS.

THE committee of the Council of the College of Surgeons who received the deputation from the Association of Fellows requested the deputation to put their suggestions in writing. A meeting of the committee of the Association was held on Friday, Nov. 7th, and the following memorandum was drawn up for the consideration of the Council of the College at their meeting on the 13th inst. "1. (*a*) That the Council be requested, if they have the legal power, to summon from time to time meetings of the Fellows separately from the Members, for the purpose of consulting about the affairs of the College, or, if they are properly advised that they have not such power, to take steps to obtain it; (*b*) and the deputation were instructed to represent to the Council the great desirability of giving the Fellows a common room in the College. 2. That the Council be requested (*a*) to send out the voting papers for the election of Council unasked to every Fellow whose address is known at the same time as the names of the candidates are issued, instead of requiring Fellows who wish to vote by voting papers to make a request ten days before the election for a voting paper to be sent; (*b*) to allow voting papers properly signed and witnessed to be received at the College up to the day of election, instead of requiring them to be sent in at least forty-eight hours previously. The present method of distributing voting papers entails upon the Fellows unnecessary trouble, prevents many Fellows from recording their votes, and tends to lessen the interest of the Fellows in the election. 3. That it be represented to the Council that no arrangement between the University of London and the Royal College of Surgeons for the purpose of conferring degrees should be concluded without the consent and approval of the Fellows of the College specially convened to discuss the scheme. The committee of the Association of Fellows desire to add that the opinions of Lord Bramwell and Lord Selborne quoted by Sir Spencer Wells at the general meeting of Nov. 6th, 1890, show that the Council has already the power to summon a meeting of the Fellows separately from the Members, and that this renders it still more necessary that the point should be settled by some authority competent to pronounce a final decision." It appears to us that the opinions of such eminent lawyers as Lord Bramwell and Lord Selborne are quite sufficient for the purpose, and that there is absolutely no obstacle to the Council summoning meetings of Fellows just as they summon now meetings of Fellows and Members. Who is to gainsay them, or what penalty could be inflicted on the College for consulting the Fellows. In the interests of the Fellows and of the College it is, however, desirable that the right to meet or to be summoned regularly, as well as the right of the Fellows and Members to be summoned to an annual general meeting, should be embodied in a Charter or in by-laws. In fact, what is needed is for the Council to come to an agreement on all controversial matters, and obtain either a new Charter or an Act of Parliament. The sooner this is done the better, and then the College can proceed unimpeded upon its way. The bread of science can be given to the children of the College at the same time as the bread of constitutional rights, which would lead to increased consideration on the part of the public to the members of the profession at large.

THE DEATH-RATE OF GREATER MANCHESTER.

ON the 9th inst. the Manchester Extension Act came into operation, and a very considerable area and population have by its operation been added to the boundaries of that city. What effect this enlargement may have upon the death-rate of the city is merely matter for conjecture, although it may safely be assumed that the death-rate of the added portion is lower than that of the central and most insanitary portion of the old city, and that the result will probably be to lower the officially recorded death-rate. The *Manchester City News*, in a recent issue, with reference to our remarks upon an article that appeared in its columns on the calculation of death-rates in general, and of the Manchester death-rate in particular, asked one or two questions, which are susceptible of very definite replies. It was asked whether the Manchester death-rate "is arrived at by a different process to that of London?" The answer is, "Certainly not." We know of no sound reasons for asserting that the same method is not used for both. It is not true that the published death-rate for London relates to the extended area of Greater London. Moreover, we are confident that by no sound and trustworthy method could the Manchester death-rate of 31·6 per 1000 be calculated at 22 per 1000. As we have stated, there is a fair probability that the enlargement of the city will reduce the death-rate of Greater Manchester somewhat below the rate of Inner Manchester; but there is absolutely no ground for expecting such a reduction as is suggested by the *Manchester City News*. The death-rate of Inner London last quarter was only 5 per cent. below the death-rate in Greater London, and there is no reason for supposing that the enlargement of Municipal Manchester will reduce its death-rate to a much greater extent than this; and even if the reduction were 10 per cent., which is improbable, the reduced rate would still be 28·4 per 1000, leaving a very large margin for the operation of improved sanitary conditions before the rate of Manchester could compare favourably with the rates in most of our other large towns. It may be noted, moreover, that the estimated density of population at the present time within the city of Manchester, as it existed before its recent enlargement, does not exceed 64 persons per acre, while in Inner London the proportional density is estimated at 59 per acre. This slight difference of density, of itself, accounts for but a very small part of the startling excess of mortality in Manchester as compared with that in London. Our contemporary affects to attach much importance to the official admission that the estimates of population of large towns, based upon the rates of increase that prevailed during the last inter-censal period, which ended more than nine years ago, are "somewhat untrustworthy." We are at a loss, however, to understand how this source of uncertainty can affect Manchester more than it does the other large towns, and how therefore it can explain the exceptional excess of mortality in that city. It should, moreover, be remembered that, based upon the experience of past censuses, the largest error by this method of estimating the population of our large towns has not affected any of their death-rates to a larger extent than 2 per 1000, whereas the recent death-rate in Manchester has exceeded the death-rate in London by about 14 per 1000. Those therefore who seek to explain the excess of mortality in Manchester by calling attention to defects in our system of mortality statistics, many of which operate in contrary directions, are veritably like drowning men catching at straws.

CATS AS A SOURCE OF DIPHTHERIA.

WHILE we know so little of the sources or causes of diphtheria, it is right to record every piece of information that suggests more light. The theory that ascribes blame to cats is supported in the *New York Medical Record* of Nov. 1st, by the experience of Dr. Coleman of Colorado, Texas. He had a patient, four years old, living thirty miles in the country, and this so sparsely inhabited that the

nearest neighbour lived six miles away. The child had not been in contact with any other child for months, and yet developed a diphtheria which nearly proved fatal, was followed by paralysis six weeks after recovery, and gave the disease to the other members of the family. The child lived at an elevation of 2000 feet above the sea, in a dry atmosphere, and far from any source of contagion. The medical practitioner was at a loss at first to explain the origin of the poison, till the father of the child mentioned that two kittens had died from some disease which he believed to be similar. The child had nursed them constantly and had been seen to kiss them. Dr. Coleman felt confident that this was the source of the disease in the child.

THE PROBLEM OF SCARLET FEVER AND THE NOTIFICATION ACT.

THE *North British Daily Mail* of Oct. 28th contains a report by Dr. Allen of the extreme pressure put on the authorities in Glasgow Fever Hospital by the number of cases of scarlet fever in the hospital. The number has been higher than has ever occurred before in the history of the City of Glasgow Fever Hospital. On Saturday, Oct. 18th, before the dismissal of the cured cases, there were 600 cases in Belvidere, of which 586 were scarlet fever cases. The difficulty to provide wards is not so great as that of providing nurses. The task of the matron is an exceedingly difficult one. Nurses, and even probationers, are not easily obtained; some after engagement withdraw, and others fall ill with the fever. Additional accommodation at Belvidere has been provided by sending cases of measles and whooping-cough to the Parliamentary-road Hospital. In moving the adoption of the report by the Council, Mr. Thomson said the increase of scarlet fever cases was wholly occasioned by the coming into force of the Compulsory Notification Act. He said there had only been one death during the last week. The large proportion of recoveries and the removal of the cases from the city he thought a great advantage. We can easily imagine this to be so; but the Notification Act would be more triumphantly vindicated if it could be shown to keep the number of cases down to more modest proportions. We are only beginning to realise what it means for the State or for municipal bodies to undertake the care and custody of infectious cases on a large scale, and without much respect to the social circumstances of the people. Similar difficulties are being experienced in Birmingham.

THE IMMEDIATE AND SUBSEQUENT SURGICAL TREATMENT OF OPERATIONS.

MR. J. FARRANT FRY recently read a paper on this subject before the South Wales and Monmouthshire Branch of the British Medical Association, the information in which was obtained from the practice of fifty-nine surgeons, and, as regards the surgical treatment of an ordinary amputation of a limb or of a breast, draws the following conclusions from the replies to questions which he received. Aseptic surgery is the surgery of the present day for modern wound treatment, and is based on the principle of the preservation of organic substances by sterilisation with germicides. The employment of carbolic spray is not a necessary part of aseptic surgery. The part to be operated on, the hands of the operator, and the sponges (or, better still, their substitutes) must be thoroughly cleansed and the wound sterilised by the use of some aseptic, of which, perhaps, perchloride of mercury, 1–1000 to 1–5000, is most satisfactory, whilst the instruments, after thorough cleansing, should be placed in carbolic lotion, 1–20; catgut is immeasurably superior to every other form of ligature. The kind of suture used is not important, but catgut absorbs too quickly for wounds where any strain exists; probably silk or silkworm gut are the best materials. Dry or moist aseptic dressings may be used, but opinion is in favour of keeping the wound dry. The wound should not be dressed for at least a week, unless necessitated by local conditions or constitutional disturbance. Theoretically speaking, a perfectly aseptic wound does not require any drainage; but if any is used, the tube should be removed on the second or third day; and in cases where primary union cannot reasonably be expected, some form of drainage may be advisable. At subsequent dressings the wound should be disturbed as little as possible, and lotions only used when there is an offensive discharge, and then aseptics must be replaced by antiseptics. "All good surgery is antiseptic, but all antiseptic surgery is not good." Perfect results can only be obtained by the strictest attention to minute details in the preparation for, the performance of, and the treatment subsequent to, the operation.

THE HOUSING OF THE PEOPLE IN SALFORD.

A VERY important step has been taken by the Corporation of Salford in the direction of improving the homes of the lower classes in the borough. Mr. Charles Paget, the medical officer of health, has made a representation under the Housing of the Working Classes Act of last session, and after lengthened and deliberate consultation the Corporation have decided on the demolition of certain blocks containing 375 houses, which by reason of their being in a condition rendering improvement out of the question must be got rid of altogether. Some are mere hovels, some are built back to back, nearly all are deprived of sufficient light and ventilation, and they are as a whole reported to be "dangerous and injurious to the health of the inhabitants." The value of the property to be pulled down is estimated at £50,000, but it is intimated that this is only the beginning of a work involving about £400,000. Alderman Dickins, who has justly acquired a reputation for his efforts to improve the sanitary state of Salford, urged that the saving of human life which would result from the work now to be commenced would alone be worth the expenditure. Very commonly such expenditure becomes in the end directly profitable to Corporations, but even if this should not be the case, improvements such as these work an immense amount of good indirectly; and it is almost all of a sort which conduces to the well-being and prosperity of the community concerned. We congratulate Mr. Paget and the Salford Corporation on this early action taken under a statute which has only this year become law, but which we hope will be utilised to deal with many densely crowded and unhealthy areas before any long period shall have elapsed.

ALBUMINURIA IN CHILDREN.

DR. SEYOURNET in the *Union Médicale du Nord-Est* describes a form of albuminuria which, he considers, is more frequent than is generally supposed among children. It differs from the scarlatinal type usually observed. He studied the former type amongst children of the age of from eleven to sixteen months. A great many of the patients had been brought up on the bottle, having been fed on unsuitable food, causing distension of the abdomen or stomach, or occasionally enlargement of the liver or intestinal disorders, accompanied by vomiting or diarrhœa. He believes this special form of albuminuria to be of an infectious character, and traces it back pathogenetically to certain toxic substances which are generated by abnormal fermentation in the bowels. These substances are absorbed by the bowels and pass to some extent into the kidneys. They produce congestion in the renal tissue, which may lead to inflammation of the kidneys. One of Dr. Seyournet's little patients had scarlet fever twenty-two days after con-

valescence from this albuminuria. It is evident from this fact that it was not scarlatinal albuminuria. It was usually accompanied by anuria, whereby the congested condition of the kidneys was intensified. With some of the patients the daily evacuation of urine was only half an ounce. In one case the patient passed no urine for more than forty-eight hours. Notwithstanding this, no uræmic symptoms appeared. It was in most cases only the anuria which led to the urine being examined for albumen. The result of the examination in each case was positive. A strongly marked feature of this disease is the œdema of the feet, sometimes also of the hands and of the eyelids and face, but the latter were not always affected. The quantity of albumen varied from a drachm to ten drachms per diem. The duration of the disease was from two to four weeks. The treatment consisted in giving milk, which in some cases was mixed with lime water. Where there was vomiting, gentle aperients, such as castor oil or calomel, were given; salicylate of bismuth was employed in order to disinfect the bowels as much as possible. Systematic massage of the lumbar regions was also employed in order to relieve the congestion of the kidneys.

THE OBSTETRIC PHYSICIANCY OF ST. BARTHOLOMEW'S HOSPITAL.

THE position of obstetric physician, vacant at St. Bartholomew's Hospital by the death of Dr. Matthews Duncan, has not yet been filled up. At the present time no notice has been given as to the intentions of the governors to elect a successor or successors to this lucrative and distinguished post. We learn that there is considerable difficulty in reconciling differences of opinion on the subject. While there is an almost unanimous opinion that the department should be enlarged, some think that only one patient, with her nurse, should be taken in the small rooms allotted to acute cases, with an addition of ten or twelve ordinary beds; others think that an addition of two or three beds would be sufficient. The obstetric department under Dr. Matthews Duncan was strong and most efficient, especially as a school of obstetric medicine, and we sincerely hope it may continue to be so; but, when we compare the percentage of obstetric beds at St. Bartholomew's to the whole number of beds, we find it much lower than at several of the other large hospitals. If the general hospitals are to hold their own against the special hospitals, it can only be done by keeping their special departments not only strong and efficient, but well forward in the knowledge and practice of the constantly advancing science in connexion with the profession of medicine and surgery.

OUTBREAK OF TYPHUS FEVER IN BIRKENHEAD.

CASES of typhus fever have recently occurred in Birkenhead sufficient in number and fatality to make some of the inhabitants fear that it was about to assume the proportions of an epidemic. Letters, paragraphs, and editorial remarks have also appeared in local papers, as well as in a Liverpool paper, reflecting very seriously upon the local authorities. These allegations of neglect and deficiency were happily disproved at the meeting of the health committee, held on the 11th inst. Mr. Vacher, the medical officer of health, explained that two villa residences, situated near the borough hospital, were taken by the health committee for the purposes of a fever hospital, and were approved by the inspector of the Local Government Board as suitable for eighteen patients. The medical practitioners who sent patients there attended to them, but Mr. Vacher himself, although under no obligation to do so, acted voluntarily as the medical officer of the hospital as well as of health. The result will not tempt other medical officers of health to go and do likewise. Although this so-called fever hospital has had two pavilions added to it with increased accommodation, it is evidently very unsuitable, and wholly inadequate for a town like Birkenhead, with a population of nearly one hundred thousand. As public attention has been thoroughly aroused to the fact of the outbreak of fever, it may be taken for granted that everything will be done to prevent further spread of the fever on one hand, and on the other to do everything that medical skill and good nursing can do for those who may be attacked. But now that the want of a fever hospital has been so clearly shown, the local authorities should lose no time in securing a suitable site, and in inviting architects to prepare plans for an isolation hospital worthy of the town. In these days sanitation and sanitary knowledge are by no means limited to members of the profession, but have spread to nurses and servants. The time has gone by when a house, even with pavilions added, will suffice for a modern or model fever hospital. The latter must be of recent construction, must obviously have ample cubic space, with free ventilation, while the administrative block should be so constructed as to give the residents every condition of health and comfort that is possible under such circumstances. It appears that the epidemic began in a set of little houses near the centre of the town, and every case reported up to the present has been traced to these houses, with the exception of two cases removed on the same day from a brothel. The first two cases were sent to the general hospital as being typhoid fever, and after recognition were removed to the fever hospital. Four other cases were reported first as typhoid fever, and some cases were not reported till too late to remove them. Since Aug. 27th (the day on which the first cases were reported) there have been 55 cases notified, of which 44 have been treated in the fever hospital. Of these, 23 have recovered, 11 have died, and of the remaining 21, 17 are in hospital. Though the total number of beds in the fever hospital is 28, there have never been more than 19 in it at the same time. Those who are most competent to judge do not consider that the epidemic is spreading, and it may be mentioned that an official of the Local Government Board has visited the fever hospital. These facts ought to allay any uneasiness which may have arisen from the sensational reports in the papers previously alluded to.

INHALERS FOR CHLOROFORM AND METHYLENE.

THE death from methylene, which we recently reported, has called forth various expressions of opinion concerning the methods of using chloroform and its ally methylene. Sir Spencer Wells has consistently advocated the employment of methylene, and has more than once indicated the way in which he believes that substance can be best administered. Methylene, whether it be a true chemical body or diluted chloroform, clearly acts very much as chloroform does, and hence must be watched and used with equal circumspection. By the employment of Junker's inhaler, especially that form recently introduced by Messrs. Krohne and Sesemann, a very precise dilution of the anæsthetic can be effected. If twenty respirations are taken per minute, and two drachms allowed as the quantity used in fifteen minutes, two-fifths of a minim will be evaporated for every respiration; but only one-half of this is actually inhaled, the rest being blown away during expiration. If six drachms last an hour, as Sir Spencer Wells asserts, only three-tenths of a minim will, taking the average, be evaporated per respiration. The greatest quantity of the anæsthetic is, of course, required to establish initial anæsthesia, very small quantities being needed to maintain the patient in that state. So that the

larger dose, two-fifths of a minim, probably represents approximately the amount of the drug inhaled at the commencement; while the smaller, three-tenths of a minim, is taken at the close of the operation. For it is certain that as the layer of chloroform becomes thinner and thinner by evaporation, the quantity of vapour taken up by the air blown through it becomes less and less. The use of a flannel mask, by ensuring full and free expiration, certainly enhances the value of the inhaler by increasing its safety. The fact should never be lost sight of that many of the dangers ascribed to chloroform and its congeners are in fact due to the imperfections of the methods used in their exhibition.

PROFESSOR KOCH'S METHOD OF TREATMENT OF TUBERCULOSIS.

HARDLY a day passes without bringing from Berlin fresh details concerning the remarkable investigations upon the treatment of tubercular disease now being carried on by Professor Koch; and, although we are yet in ignorance of the precise nature of the agent that he employs, sufficient information has been supplied to point to its being productive of very striking effects. It is said that the "lymph" is no longer used in combination with metallic substances, that its injection is followed by very marked local and constitutional symptoms—according to one correspondent the temperature rising to 104° F. or higher. We learn also that surgeons, such as von Bergmann, who is engaged in carrying out the treatment in his wards, and who promises shortly to speak of its results, are satisfied with its very remarkable action in cases of tubercular joint disease and in lupus. Accepting all statements with certain reserve until they are authoritatively confirmed, we may refer on this point to the remark made by the *Daily News* correspondent (Nov. 12th), to the effect that "its success in cases of tubercular disease of the skin, joints, and bones is declared to be absolutely certain as well as in the primary stages of consumption." The same writer mentions that Prof. Koch has "cured a case of lupus on the face and arms in five days without any scar being left," and gives fuller particulars of a case of lupus of the face treated at Frankfort by Dr. Libbeitz, by which the rapidity of the action of the "lymph" is illustrated. Should these accounts be even partially confirmed, they will demonstrate that no such powerful agent has ever before been introduced into medicine. It is said that there is hardly a scientist in Germany who questions the efficacy of the remedy, and it is difficult not to accept the evidence of those who, knowing their responsibility and the weight attaching to their utterances, would scarcely imperil their reputation and that of German medicine by an incautious or thoughtless adhesion to a method of the value of which they were not fully convinced. Cases of pulmonary tubercle do not seem to be so amenable to the treatment as other forms of the disease, but yet several correspondents mention facts which would appear to show that a more prolonged treatment (six to eight weeks) has sufficed to arrest the progress of even the more advanced cases of consumption. Temporary wards are to be erected in the grounds of the Charité for Professor Koch's personal use. Dr. Cornet is already in charge of several lung cases, and Professor von Bergmann and his assistant Dr. Nasse are treating surgical cases. We fear that the advice of Dr. Nasse, reported by *The Times* correspondent (Nov. 11th), to foreign invalids to resort to Berlin without delay may be likely to lead to some embarrassment and often to much disappointment, not to speak of greater evils. Such patients should think twice before incurring the risks of residence in Berlin during the winter, and we should have thought it would have been far wiser to abstain from such advice until the chance of patients being promptly treated became less remote. It was at one time reported that the Emperor, who has had an interview with Professor Koch, has been so impressed with the value and importance of the discovery as to intend to give Professor Koch £100,000; one moiety as a personal gift, the other to found an institution for the preparation of the "lymph." This, however, does not not appear to be the case, but the Government have placed 200,000 marks at Dr. Koch's disposal for the erection of a special hospital. It is likely that the Government may secure the monopoly of the material, besides establishing institutions for the treatment of the poor, who otherwise would be unable to secure its benefits. Meanwhile the medical world is waiting anxiously for the authoritative declarations of Professor Koch himself, whose first report on his experiments is to be given before the Medical Society on the 26th inst., or, according to later information, it will be published in the *Deutsche Medicinische Wochenschrift* of to-day. We understand that it is the intention of the authorities of the Brompton Consumption Hospital to send to Berlin a commission to report on the method and its results.

UNHEALTHY AREAS.

MR. J. THEODORE DODD writes to us that the real difficulty in dealing with areas such as that in Bethnal-green, which has recently been under the consideration of the London County Council, is the cost. This, he says, is due first, to the landlords being paid too much; second, to the fees of lawyers and witnesses on behalf of the claimants; and thirdly, he points out, the entire cost falls upon the rates. He argues, therefore, there should be a simpler mode of purchase, and that half the cost should fall on the London landlords. With regard to the question of procedure, everyone will desire that this should be as simple as possible; but as to the propriety of half the cost falling on London landlords there is much room for difference of opinion. Upon one point, however, all will be unanimous, and that is that the unwholesomeness of property in any area about to be improved should constitute a substantial reason for the reduction of compensation. The Compensation Clauses in the Housing of the Working Classes Act aim at bringing this about; but it is within the discretion of the arbitrator to give as much effect to this intention as he thinks fit. The proceedings in connexion with the Bethnal-green area will therefore be watched with great interest. The selection of the arbitrator is in the hands of the Home Secretary, who in making the appointment should choose an officer capable of appreciating sanitary circumstances.

PULSATING LIVER.

THE close vascular relationship between the liver and the right heart furnishes a ready explanation of the close functional relationship between these two organs. But apart from functional derangements, the consequence of congestion of the right heart, we are familiar with definite hepatic physical signs in evidence of such congestion—e.g., the signs of a swollen liver. Accompanying the swollen and tender liver there is present nearly always epigastric pulsation, more or less pronounced. This epigastric pulsation is usually the result of transmission of the ventricular beat by the depressed and turgid liver; sometimes, as Dr. Balfour points out, the impulse is a transmitted one from the great vessels lying against the spine, the vena cava, and the aorta; in either case the liver acts merely as a tumour lying against a pulsating vessel. Sometimes, however, the liver actually throbs, every part of its substance expanding with each stroke of the heart. This is a comparatively rare accompaniment of disease of the heart. There is at present in the Royal Free Hospital, under the care of Dr. Sainsbury, a case of this kind. The patient is a lad aged eighteen; he has suffered from shortness of breath ever since he had St. Vitus'

dance at the age of ten; since then he has had two attacks of rheumatic fever, and during the last year his heart trouble has culminated. He was admitted into the hospital in February of this year, was discharged in April, and readmitted towards the end of October. The heart at present is enormously enlarged, dilatation preponderating. There is evidence of mitral and tricuspid regurgitation, and doubtfully of aortic regurgitation. The vessels of the neck pulsate as far as the angle of the jaw; the feet are slightly œdematous. No fluid can be detected in the abdomen; the lungs manifest the signs of bronchitis at the bases. The edge of the liver extends from below the right anterior superior spine of the ilium upwards beneath the umbilicus to the ninth or tenth left costal cartilage. There is some tenderness of the surface, and when grasped between the two hands there is distinct expansile pulsation, which, as compared with the carotid pulse, is slightly delayed. There is pulsation underneath the xiphoid cartilage, which is obviously transmitted from the heart. The apparent enlargement of the liver is increased by the depression of the diaphragm by the enormous heart. The spleen is not felt. The case is worthy of notice, not only because of the liver pulsation, but because of the selection, as it were, of that organ to relieve the congestion of the right heart, and because the portal obstruction thus caused has not led to ascites. The absence of much general dropsy is also of interest.

PUBLIC HEALTH SERVICE.

THE Royal College of Surgeons of Edinburgh has represented to the Board of Supervision the necessity of relieving superintending county medical officers of health from private practice, so that they may be able to discharge their important duties without friction in their relations to the rest of the medical profession. This is in accordance with the feeling of the time; but the question must be asked, What provision is to be made for these officers? It is recognised by the statutes that the medical officer of health is to possess knowledge of a technical kind over and above that which is required for the discharge of ordinary professional duties; but local authorities who fix the salary for the officer remunerate him on a scale which is very considerably less than he could obtain in practice. Under these circumstances the public health branch of the profession is falling into disfavour. For the next few years there may be no lack of candidates for office, but already we hear of the unwillingness of students to prepare for a career in which recent experience has shown there are no prizes. The parsimony of local authorities, rich as well as poor, must, if persisted in, ruin one of the most useful services the State can possess. It is matter for deep regret, but it is the inevitable outcome of the short-sightedness of the time.

THE ESTABLISHMENT FOR GENTLEWOMEN.

THE Establishment for Gentlewomen during temporary illness at 90, Harley-street, is now closed. The Lady Superintendent, the nurses, and the servants have gone, and five out of seven of the gentlemen's committee, including the treasurer (Mr. Ruthven Pym) and the whole of the medical staff, have resigned. This complete collapse of one of the most useful institutions in London has, we are informed, been brought about by the dismissal by the Ladies' Committee of the Lady Superintendent, Miss Meyrick, without an alleged cause. Miss Meyrick is said to have performed her duties for sixteen years to the complete satisfaction of all the medical officers under whom she has worked, and has obtained year by year, including the present year, the strongly expressed approval of the ladies' committee in their annual report. Her dismissal without an alleged cause appeared to the gentlemen's committee and the medical staff such an act of injustice that, failing to obtain from the ladies' committee any adequate explanation for their harsh treatment, the whole medical staff and five out of seven of the gentlemen's committee have resigned. We regard the closure of this institution as a public misfortune, as it provided at a small cost a home in illness, with medical and surgical treatment, for gentlewomen of small means. The establishment has always maintained a high reputation, and will be remembered as the home in which Miss Florence Nightingale was lady superintendent, and from which she started with her band of nurses for the Crimean War. The acting medical staff comprise Drs. J. W. Ogle, Douglas Powell, J. Williams, and Champneys; Messrs. G. Lawson, Couper, Marcus Beck, and Godlee; Mr. W. R. H. Stewart, Mr. Gregson, Mr. W. E. Stewart, and Dr. E. Stewart—gentlemen in whom the medical profession have complete confidence, and who would not, without very good cause, have given up their duties.

THE SALE OF DISEASED MEAT.

A CASE of some interest has just been heard before Mr. Justice Hawkins and Mr. Justice Stephen in the Queen's Bench Division. This was an appeal from the decision of the Justices at Selby in the West Riding of Yorkshire, who had refused to convict a man charged with exposing or depositing an animal's carcase in a place for the purpose of sale, or preparation for sale, such carcase being intended for the food of man, the meat being diseased, or unsound, or unfit for the food of man. On behalf of the defendant, it was argued that the meat was deposited in a shed or out-building part of the Gray Horse Inn yard at Selby, which is neither part of a butcher's shop nor in connexion with one, and therefore the meat was not exposed for sale. It was proved, however, that the meat was obtained from a cow which the defendant had bought for thirty shillings, it being stipulated by the vendor that it was not to be offered for human food; the latter, hearing it was likely to be sold for food, called on the defendant, who inquired whether the cow had been physicked, and, on being informed that it had not, said, "Then it is good beef," and that he was going to pickle and cut it up, and he refused to give it back. It was argued for the defendant that there was no offence unless the meat was exposed for sale, but Mr. Lumley Smith, in reply, pointed out that the enactment in the Public Health Act was in the alternative, "shall expose for sale or have in possession for preparation for the food of man, and intending it for the food of man." The case, he said, was clearly within one part of the enactment, though not of the other. The Court adopted this view, and said the magistrates had come to a wrong conclusion as to the law, and the case was therefore remitted to them as having been wrongly dismissed.

MANIPULATION OF THE NASAL MUCOUS MEMBRANE.

DR. VON CEDERSCHIÖLD has for some years employed a kind of manipulation, which he considers is of the nature of massage, in various affections of the nasal and pharyngeal mucous membrane. He first tried this kind of treatment on himself while suffering from chronic pharyngeal catarrh following diphtheria, and since then has had opportunities of using it on about a hundred cases in Stockholm. The instrument for the nares consists of a double spiral of silver wire about five inches in length, provided with a small wooden handle at one end and a loop or eye at the other. This loop serves to fasten one end of a strip of batiste—a material of which infants' frocks are made—which is wound round the spiral so as to cover it completely before the process is commenced. The instrument is gently introduced into the nostril, and moved

to and fro. For the pharynx a sponge-holder is used, carrying a pledget of cotton-wool, which, as well as the metal parts, is carefully covered over with batiste. Gentle but rapid friction movements are made with this over the mucous membrane of the pharynx or naso-pharyngeal space. Not content with manipulating these regions, Dr. von Cederschiöld has actually invaded the interior of the Eustachian tube. For this purpose he employs a spiral similar to that used for the nares, but much finer—fine enough, that is to say, to be introduced into the tube through an ordinary Eustachian catheter.

DIPHTHERIA IN CROYDON.

IT is to be hoped that the prevalence of diphtheria in Croydon has been successfully checked now that it is said it has been discovered that the means by which the infection was conveyed was milk from a certain dairy farm. The Town Clerk officially announces that Croydon is jealous of its sanitary reputation, and Dr. Philpot, the medical officer of health, declares that the borough is in a satisfactory sanitary condition, and that the sewers are being flushed and disinfected. An authority that is able to speak in this way ought, by the provision of proper means of isolation, and by checking communication between sick and healthy, especially at school, to be able to control an infection such as diphtheria, and we hope this result will be attained. In the meantime, very careful investigation ought to be made as to the means by which the milk became infective, a point as to which Dr. Philpot has hitherto been silent. When milk leads to the diffusion of diphtheria it often happens that no antecedent case can be discovered in the human subject, and that even if persons about the dairy are infected, their attacks are only part of the general prevalence. We are probably only just beginning to apprehend the relation which milk bears to the diffusion of diphtheria, and now that the data needed for exhaustive inquiry are so largely supplied by means of the compulsory notification of infectious diseases, the promptness necessary to a successful investigation of the circumstances involved ought to be attained.

DEATH OF DR. WATERS OF CHESTER.

WE regret to hear, on the point of going to press, of the death of Dr. Waters of Chester, which occurred very suddenly on Tuesday night. Reserving further notice of Dr. Waters till next week, we need only now say that the profession loses by his death one of its best provincial representatives, whose efforts, jointly with those of others, led to the legislation of 1886, which gave the general practitioners five seats in the Medical Council.

COINAGE AND INFECTION.

IT is no new doctrine that in the presence of infectious or contagious disease every object may become endowed with a mischievous faculty of transmission. Nothing is exempt, though some substances are naturally better fitted to act as media than others. Such substances as clothing and carpets may be placed in the first rank, and paper, especially in the book form, hardly second. The scrupulous rigour with which measures of purification are adopted in regard to all these is proof of the wholesome suspicion with which they are commonly invested. It was not to be expected that paper money could escape the stigma, nor should it. Even solid coin has latterly been credited with the same maleficent property. It cannot be denied, indeed, that any penny or shilling may thus be made to bear a novel and mischievous increment of its own. At the same time we can avail ourselves of the relief afforded by modifying circumstances. It is well, for example, to remember the wholesome qualifications introduced by the moving and ventilating process of currency, by the protection of a purse, and by a generally smooth and well-polished metallic surface. On a critical examination of the subject, we are tempted, notwithstanding, to look back with some regret to the old custom of washing change. To insist upon this in ordinary cases of infection would, indeed, be fanciful and unpractical, though we might forgive such pious care. Where, on the other hand, we had to deal with foul and active contagion, we should not care to ridicule one who disinfected his change. In so doing, he only obeys the suggestions of cleanliness and caution.

NEALE'S MEDICAL DIGEST.

WE understand that a new and enlarged edition of Neale's Medical Digest is on the eve of publication. The intimation reminds us of the unique and useful character of that excellent work of reference. It will now embrace a period of fifty years' medical journalism, so that it can be easily imagined how numerous must be the writings which Dr. Neale has classified. The plan of his book is doubtless well known to all our readers, the readiness with which any subject can be referred to being a notable feature; whilst the arrangement of the various topics under headings and subheadings affords at a glance a clue to many an obscure subject or a hint as to treatment, without the necessity of referring to the original paper. Indeed, the work is well termed a "Digest," for it is much more than a mere index. We are grateful to Dr. Neale for continuing his devoted task, which is doing so much to lighten the labours of his medical brethren, and we trust those medical brethren will show their appreciation of his untiring energy and his most useful contribution to medical science by subscribing to the new edition of a work which should be in every practitioner's library. Strong testimony as to its value to the general practitioner is recorded in another column.

THE DRAINAGE OF WOKING.

A DEFINITE scheme of sewerage and drainage has at last been prepared for the neighbourhood which has so rapidly grown up around Woking Station. The scheme is devised by Mr. C. N. Lailey, C.E., and it is forthwith to be submitted to the rural sanitary authority of Guildford, who are responsible for the sanitary administration of Woking, and who will probably apply to have the locality converted into a special drainage district.

THE VERDICT ON THE SMITHFIELD FIRE.

PARTICULARS elicited at the recent inquest held in the City mortuary explain the series of unfortunate circumstances which culminated in the late disastrous fire in Smithfield. First, there was the storage of naphtha in excess on the premises, then its use on the first floor of the building, the gas of the stove imperfectly turned off, the naphtha can imperfectly corked, and the final explosion and fire which effectually barred the retreat of the hapless workers. The verdict included a heavy censure upon the employers for culpable negligence in the conduct of a dangerous occupation, and a recommendation that premises used for this purpose should be constructed and examined with a view to the possibilities of accident. It erred, perhaps, in assigning too little responsibility to the workmen accidentally concerned in the explosion. Their error, after all, however, was certainly less than those radical faults of general management but for which the consequences of the fire would have been far less serious. It would almost seem as if the whole subject of the storage and use of naphtha for manufacturing purposes had been lighted up with tragic brightness and precision by this conflagration.

Our readers cannot fail to agree that the lessons thus severely taught as to the quantity, place, and mode of use of such perilous materials, and the need of more special provision for escape in case of accident, should be indelibly fixed by statute in so far as they now are not, and impressed by periodic inspection.

FOREIGN UNIVERSITY INTELLIGENCE.

Jena.—Dr. Richard Neumeister of Berlin has qualified as *privat-docent* in Medical Chemistry.

Rostock.—Dr. Michaelis, late of Aix-la-Chapelle, has commenced work as Professor of Chemistry and Pharmacy. Dr. A. Töhl has been promoted to an Extraordinary Professorship of Chemistry.

Marburg.—Dr. Q. von Büngner has qualified as *privat-docent* in Surgery.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. du Moulin, late Professor of Midwifery in Ghent.—Professor Schwartz of Göttingen.

THE retirement of Dr. Roberts Bartholow from the chair of Materia Medica and Therapeutics in Jefferson College, Philadelphia, is announced. His work on Therapeutics is well known, and was characterised by a very strong faith in the efficacy of drugs. Dr. Hobart Amory Hare has been appointed to the vacancy. Dr. Hare was recently appointed editor of the *Medical News*, in succession to Dr. Hays, and has also lately published a work on Therapeutics. He graduated in 1884, and is the author of more than one successful prize essay.

DR. GUIDO BACCELLI, who, at the approaching general election, will again come forward as a candidate for one of the divisions of Rome, will be entertained by his supporters at a public banquet on the 15th inst., when he will expound his political programme, with particular reference to State hygiene and medical education.

A REUTER'S telegram announces that the recrudescence of influenza in Germany has now been placed beyond doubt. A school at Nagold, in Wurtemberg, has had to be closed in consequence of the severity of the epidemic.

THE inhabitants of St. John's, Newfoundland, appear to be suffering from severe epidemics of both measles and diphtheria, the mortality from each of which is stated to be very high.

THE Prince of Wales has appointed Sir Oscar Munro Passey Clayton, C.B., Extra Surgeon in Ordinary, and Dr. Alan Reeve Manby, Surgeon Apothecary to His Royal Highness.

DR. DONALD MACALISTER has been elected a member of the Senate of the University of Cambridge.

SCARBOROUGH HOSPITAL AND DISPENSARY.—During the past twelve months the number of patients treated has exceeded the exceptional increase recorded on the previous year. The medical and surgical cases were 268, an increase of fifteen on 1889; and 14,736 home visits had been made by the house surgeons, an addition of 1686. The financial statement shows that the income altogether had been adequate to meet the expenditure and to reduce the previous deficit to £114.

Pharmacology and Therapeutics.

BISHOP'S GRANULAR EFFERVESCENT PREPARATIONS.

WE have received from Messrs. Alfred Bishop, Specksfields, Mile-end New Town, specimens of granular effervescent preparations, in which are skilfully incorporated various agents of reputed therapeutic value. They are all well granulated and are readily soluble in water. The effervescent carbonate of iron preparation contains 2 gr. of the carbonate in each drachm. That the iron is in the proto-condition of salt we have satisfied ourselves on the following evidence. Ferrocyanide of potassium gives a mauve colour. The solution turns rapidly brown in contact with air, and sulphocyanide gives no colouration until it is so exposed. The iron and arsenic preparation contains in each drachm four grains of iron, three minims of arsenic (Fowler's solution). Here the iron in the per state is evidently associated with ammonium citrate. Ferrocyanide gives no dark-blue precipitate till acidified with hydrochloric acid. Caustic soda gives no precipitate, but when heated the smell of ammonia is unmistakable. The arsenic was easily obtained as deposited metal upon strips of clean copper-foil. The antipyrin preparation contains five grains in each drachm. Exhaustion with spirit and subsequent evaporation yielded a residue which gave a beautiful green colour with a crystal of nitrite of sodium; a reaction of antipyrin not very generally known. The exalgine preparation contains two grains of the drug in each drachm. Exalgine is the comparatively new remedy which has been suggested as an efficient analgesic in cases of neuralgia, sciatica, and rheumatism.

STYRONE IN OTITIS MEDIA.

Dr. Cheltsoff strongly recommends the employment of a solution of styrone in chronic inflammation of the middle ear. Two forms of styrone exist, both, of course, having the same formula, $C_9H_{10}O$; one consists of acicular crystals, melting at 33° C. and dissolving readily in ether and alcohol; the other—which is cheaper—is a yellowish liquid with an acrid taste, insoluble in water, but readily soluble in ether and alcohol. It is this latter form that Dr. Cheltsoff has used. He orders a solution of the strength of about a drachm to four ounces of spirit, of which from two to four teaspoonfuls are directed to be mixed with a tumbler of warm water for each syringing; the operation should be repeated two or three times a day. Styrone being both strongly disinfectant and deodorant as well as somewhat analgesic, the secretion soon diminishes and becomes less unpleasant, besides which, the pain, if present, is ameliorated. No irritation is produced as when many other substances are used in sufficiently strong solutions to destroy the micro-organisms present in the secretion.

SULPHONAL IN CHOREA.

The notable improvement in many cases of chorea during the administration of sedatives, such as chloral or bromide of potassium, has long been recognised by the profession. Dr. J. A. Jeffries has recently published (*Medical News*, Philadelphia) his experience with sulphonal. Five of his cases were simple chorea—that is, first attacks of recent origin. These all recovered within three weeks. In two arsenic had failed, in two it was never used, in the fifth either arsenic or sulphonal alone failed; but together they were quickly followed by improvement. Sulphonal was also employed in five other cases, which were either of long standing or second or third attacks; four were at the period of puberty. Three of these cases got well at least for a month; in three arsenic had failed; in two it was not used. Two did not recover with any treatment. All the cases were also ordered a daily sponge bath, simple diet, and sleep in the middle of the day. Although the treatment has only been employed in ten cases, and two of these have shown no improvement, the results in the other cases appear sufficiently encouraging. In reports upon simple chorea, however, it is well to check the results by the average duration of such cases when not under medicinal treatment.

THE ADMINISTRATION OF OREXIN.

The value of this agent in promoting appetite having been challenged in many quarters, Professor Benzoldt, who originally introduced it, has taken some trouble to account for its failures, and, curiously, has to confess that the source of failure appears to be due to the method of

administration which he originally recommended—viz, in gelatine-coated pills. He agrees with Dr. Reichenberg in thinking that the orexin hydrochloride in some way acts upon the gelatine capsule or coating, so as to render it insoluble in the stomach. In accordance with these views he now advises its employment in starch-paper wafers. The remedy seems to have given satisfactory results in the hands of Dr. Glückziegel, Dr. Beekh, and others.

DR. J. ROUSSEL'S TREATMENT OF PHTHISIS.

(From a Correspondent.)

WHILE the Berlin papers have been seriously discussing the hopes entertained that Dr. Koch's investigations may lead to the discovery of a remedy for tuberculosis, the Parisian press has diverted its readers with descriptions of a wonderful process by which Dr. J. Roussel is said to perfume the human body with such scents as that of the jasmine, the heliotrope, &c. The hypodermic injection of the essences of these plants would give to the breath and the exhalations of the skin the sweet savour of delicate flowers. Strange to say, the Parisian gossip and the scientific talk of the Berlin press are intimately connected one with the other. We need hardly remark that Dr. Roussel, the well-known physician who invented the instrument for the transfusion of blood, has not devoted himself to the art of perfuming beauties, professional or otherwise, of Parisian society. But he has taken up from the very first the principle of hypodermic injections for the treatment of a great number of diseases, and notably for phthisis. Perhaps, however, the fantastic stories related with regard to the perfuming of the body have arisen from Dr. Roussel's treatment of morphiomaniacs and inebriates of chloroform, ether, &c. To patients of this description he has suggested innocuous hypodermic injections of aromatic vegetable essences or perfumes, and has thus diverted the minds of such sufferers. But he has never advised any healthy person to practise hypodermic injections of scents or any other substance whatsoever.

Dr. Roussel's theory is that all the symptoms of phthisis are the efforts of nature to throw off the microbe which is destroying the system. The suppurations, expectorations, are nature's attempts to get rid of the invading bacilli. The high temperature burns the leucomaines &c. that circulate in the blood; the abundant night sweats, the diarrhœa and surcharged urines, are all so many modes of elimination. They are the arms which nature has given the human body to expel those animal particles which have been rendered injurious by the invading microbe. Therefore Dr. Roussel maintains that true science rests in the use of such therapeutics as will attack only the microbe, and that we ought not to try to diminish the power of those weapons which our organism employs in self-defence. Rather should we seek to increase the vitality of the subject who serves as a field of battle between human life and the life of the microbes. But remedies swallowed injure and disturb the organs of digestion, and therefore weaken the patient, while they altogether fail to reach the lungs, where the microbes are located. General hygiene, constant ventilation, plenty of sunlight, and sanitary knitted woollen clothing, are all strongly advocated by Dr. Roussel. When these are secured a general improvement in the condition of the patient is often noticed, and it is the good hygiene rather than the drugs given that secures such amelioration. To prove the efficacy of a drug, the improvement should take place when no alterations are made in the patient's surroundings and mode of life. This is what Dr. Roussel professed to have accomplished by conveying through the medium of the blood, direct to the lungs, antiseptics fatal to the life of the bacillus of Koch.

The method employed is simple, the practice easy, but the indications given must be very rigorously observed, otherwise unpleasant accidents may result. Eucalyptol is Dr. Roussel's favourite antiseptic, which he uses in the proportion of 20 per cent. for his hypodermic injections. But if this or other medicaments are diluted in some substances very grave accidents may result. Dr. Roussel employs pure sterilised olive oil, as this is a substance not foreign to the usual nutrition of the human body. It is easily saponified and assimilated by the organism. This is effected as readily by the capillaries of the skin as by the digestive tube. But oils of a mineral base, such as petroleum &c., are rejected as being artificial, irregular, and even caustic. The volatile essence contained by sterilised olive oil travels with the blood till it reaches the lungs, and there, being placed in contact with the air the patient breathes, becomes diluted in the lungs, evaporates, and escapes with the breath. Thus the patient's breath smells of eucalyptol very shortly after the injection, and subsequently both the sweat and the urine have the same odour. When thymol is used the odour is very pleasant, and several patients have been surprised and pleased to find how sweetly they were perfumed by this medical treatment.

Naturally the injections have to be taken for several months, as the perfumed effluvia must be absorbed—must, in fact, embalm the entire body, to preserve it, as that of a mummy, against the destructive microbes. The friends or nurse of the patient can easily be taught how to perform the operation. This, done systematically and persistently, will, Dr. Roussel maintains, kill the bacillus of Koch, especially if it be a case, not of inherited, but of contracted phthisis. The first cases treated in this manner by Dr. Roussel date as far back as 1883 84, and some of these patients have enjoyed good health ever since. A female patient of the late Dr. Fauvel, the eminent physician who presided at the International Congress of Hygiene of 1878, was sent to Dr. Roussel by Dr. Fauvel. Her right lung was affected, and numerous bacilli had been found in her sputa. The treatment commenced in January, 1883, and in January, 1884, the bacilli and all acute symptoms had disappeared; the patient gained weight, and has ever since been able to work, earning her living as a sempstress. This patient has been seen and examined by numerous physicians, and the case is interesting principally because it is one of the earliest on record. In the month of March, 1888, Dr. Roussel brought before the Society of Practical Medicine eighteen patients suffering from phthisis. In the month of March, 1889, he brought the greater number of the same patients before the society, so that they might be examined by the same medical men who had seen them a year previously. These eighteen patients had received altogether 4714 hypodermic injections. One of the eighteen patients, who seemed to have recovered his health, started on a journey, contracted double pneumonia, and died. Drs. Tison, Guerder, Duchesne, Gaudin, Thermes, Boyer, Gronineau, and others examined, at the end of the year, fifteen or sixteen out of the eighteen patients. They all testified that the place where these numerous hypodermic injections had been administered remained in a perfectly normal condition. There was no inflammation. Dr. Dujardin-Beaumetz presided at this sitting, and a resolution was carried to the effect that the numerous injections of various substances had left no trace whatsoever. On the other hand, the patients were either to all appearances cured, or very greatly improved in health. In several instances the analysis of the sputa showed that the bacilli of Koch had disappeared altogether. Apart from these particular cases brought before the Society of Practical Medicine, Dr. Roussel has some thirty double analyses of the sputa of his patients made either at hospitals or by eminent bacteriologists. The first of these two analyses for each patient shows that the bacilli of Koch abounded in the sputa. The second, made generally twelve months later, declares that the bacilli had disappeared.

In 1886 Dr. Benjamin Ball made experiments at the Laennec Hospital for Incurables, carrying out Dr. Roussel's system. Out of twenty-one patients, ten were able, after treatment, to leave the Hospital for Incurables and resume their work, five were still under treatment at the time these facts were reported by Dr. Ball to the French Academy of Medicine, six had died. Dr. Ball stated, in his report to the Academy of Medicine, that the hypodermic injections had a marked effect on the "septic" symptoms of phthisis; namely, there was a cessation of night sweats, of diarrhœa, a reduction of the expectoration and the fever, together with improved appetite. Dr. Ball could not affirm that a cure had been found for phthisis, as the experiments had not been made on a sufficiently extensive scale; but evidently there was good ground for hope.

On July 7th, 1887, Dr. Roussel explained to the Society of Practical Medicine that one of the great obstacles to the

diffusion of the hypodermic method was the imperfection of the instruments. The syringe generally used for the injection of morphia is altogether unsuited for constant treatment. The metal is too readily oxidised, and the instrument cannot easily be kept clean. Nor are the needles long enough to traverse the dermis. The liquid oozes out again through the channel pierced by the needle, and irritates the nerves and capillaries on the surface of the skin. Dr. Roussel employs a syringe made of celluloid, a substance composed of camphor and cellulose treated by nitric acid. Hard, transparent, unbreakable, non-porous, it cannot be affected by the metalloids and alkaloids used for hypodermic injections. The needles are of steel covered with platinum, and four centimetres in length. They carry the liquid under the cutis as far as possible from the puncture on the skin. By the nature of the instrument employed, by the antiseptic precautions taken, by the easy assimilation of the vehicle, sterilised olive oil, in which the medicament is diluted—all accidents that might otherwise result from the constant practice of hypodermic injections are avoided. These latter practical considerations are, he considers, of the utmost importance, for many failures have attended this mode of treatment, not because it was wrong in principle, but because it was clumsily applied.

During the Medical Congress held in Berlin last August Dr. Roussel went to the Charity Hospital, and there performed many hypodermic injections on patients suffering from phthisis, to show how this could be done without inconvenience or accidents. Whatever may be the secret of Dr. Koch's treatment of phthisis, Dr. Roussel claims that, since 1883, he has, with marked success, treated this malady by hypodermic injections of metalloids and alkaloids. Dr. Roussel also has not hesitated to supply Dr. Koch, in response to the inquiries made by the eminent German professor, with full details as to his mode of procedure. In fact, there is no secret whatsoever in Dr. Roussel's system; the profession are welcome to make every inquiry, and he is ready to show everything, even his patients, to competent investigators.

Such are the main features of Dr. Roussel's claim to be heard on the question of the possible remedy for phthisis. In this description of the facts and arguments adduced by Dr. Roussel there is no attempt at criticism. The sole purpose in view is merely to state Dr. Roussel's case, for it cannot fail to be of interest when so many hopes are being awakened as to a possible remedy for phthisis.

INSURANCE AND THE MEDICAL PROFESSION IN FRANCE.

INSURANCES are not so generally effected in France as in England. They are not so necessary, and even where they would prove most advantageous, they have not yet become part of the customary life of the people. If the French as a nation do not avail themselves to any large extent of the advantages that insurance offers, the medical profession in France is even less prone to profit by this method of providing for possible disaster. There are special professional reasons to account for this deficiency. The French, it is well known, are amongst the most thrifty people of Europe. If there are but few very wealthy persons in France, the number of persons who possess small properties is very large. Also imprudent marriages are the exception, instead of, as in England, the rule. For in the middle and professional classes a marriage rarely takes place if the lady has no marriage portion. Consequently, if the wife has a fortune, has something to fall back upon, even if the sum be not very considerable, it, to a great extent, removes the otherwise urgent need of life insurance. Then, as land and wealth generally are more evenly diffused in France than in England, it more often happens that the husband is not exclusively dependent on what he earns, and if he dies prematurely will have something to leave to his family, even though his life had not been assured. Finally, everything facilitates thrift in France, and the simple workman as well as the millionaire is holder of Government stock. Consequently there is a strong temptation to invest savings in public securities, instead of paying premiums on insurances. These are the principal reasons which may be adduced to explain why insurances are, comparatively speaking, unpopular in France; and these reasons apply to all classes of the community. But apart from such general considerations, our inquiries made in various directions concur in showing that, of the various liberal professions, the medical profession is the last to avail itself of the facilities afforded by the insurance companies.

On speaking of this matter to a large number of French medical men, we were generally met with arguments setting forth the difficulties in the way of establishing mutual benefit societies among doctors. On this many animated arguments have been held by numerous medical associations. But when we urged that, in the meanwhile, the medical profession might avail itself of the assurance companies, we found that very considerable ignorance prevailed as to the existing facilities. For instance, we met one well-known physician who had insured his life for the benefit of his wife. If he died first, his wife was to receive the sum for which he was assured; but if his wife died first, as he had no children he would cease paying the premium, and the policy would lapse. Under such circumstances the premium should be much less than what is usually paid. This had never occurred to the physician in question. He had evidently never given his mind to the subject, and was resigned to the idea of losing all the premiums he had paid should he survive his wife. Medical men, we subsequently found, are exceptionally ignorant of what can be done in the matter of insurance, and this is one reason why, as a class, they have done so little. At the insurance company Le Phœnix, the directors, in answer to our inquiries, declared that medical men took no special precautions, and were certainly far from being their best customers. At the insurance company Le Monde, the director stated that medical men were not at all prone to insure their lives. This was so much the case that it had never occurred to the company that it was worth while instituting any special inquiry as to what particular mode of insurance was preferred by the medical profession. Statistics bearing on the question might, however, be useful. Among the members of liberal professions, those who were most careful to insure their lives were the school teachers. Though but poorly paid, and earning as a class much less than medical men, the school teachers of France were particularly careful to insure their lives.

The director of the insurance company L'Urbaine gave us a chart which showed that the prevalence of insurances coincided with the prevalence of education. There were two maps of France, one published by the Minister of Public Instruction. Each department is coloured according to the proportion in every 1000 of the population who can neither write nor read. The lightest colour indicates the departments where only 0 to 5 per 1000 are unable to read. In the darkest, the proportion is 33 to 85. By the side of this map is another, where the lightest coloured departments indicate that the number of insurances effected varies from 33 to 10 per 1000 inhabitants. In the darkest coloured departments the proportion is only 1 in 1000. The curious point is the almost identical colouring of these two charts. Where education is more general there also insurances are more frequent, and in this respect the departments of the north-east and the south are the most favoured. The great central portion of the country, from the departments of the Manche down to the Charente Inférieure, right across France in a south-easterly direction, to the Haute Savoie and the Basses Alps, is the most benighted in respect both of elementary education and the prevalence of insurances.

According to the director of the Urbaine, it is the commercial men who are the most prone to insure their lives, and this company has not so large a number of teachers on its list. But here, again, we met with the same complaint with respect to the neglect of medical men. A few medical men practising in Paris did insure their lives, but these were very generally young practitioners, whose future life was uncertain. If a medical man reached the age of thirty-five to forty-five years, he generally answered that he had enough money, and did not need to insure. Those few medical men who were in receipt of large incomes generally preferred what in France is called the mixed insurance, which means that the sum is payable on the attainment of an agreed age. If the proportion of medical men insured is very slight, this is due in a great measure to the exceptional difficulties encountered by the agents of the in-

surance companies. When can such an agent call on a doctor who has a large practice? At the consultation hour? This would be an unwarrantable interference with the doctor's professional duties. Again, it is often as difficult to see an eminent consulting physician as to interview a Cabinet Minister. In a word, the insurance agent has little or no opportunity of explaining matters to the members of the medical profession who hold high positions; and the latter rarely if ever go out of their way to make inquiries. Hence the director of the Urbaine Company expressed strongly his conviction that if so few prominent medical men were insured, it was simply because they did not understand the advantages insurance offered, and it was not practical to draw their attention to the subject. It is easier to lay the matter before the young practitioner who is commencing his career, and it is still more easy to speak with provincial or country practitioners. Consequently by far the largest number of doctors who have insured their lives practise either in small country towns or in rural districts. The number of dentists insured, however, is very much larger. This is due to two reasons. Dentists as a class are much better business men than doctors, and they are much more accessible. The insurance agent has, therefore, a better chance of obtaining a hearing from the dentist. He has also much better prospect of success with foreign than with French doctors; and, though the Urbaine is a French company, it has insured proportionately a much greater number of medical men in Spain, Italy, Switzerland, and Austria than in France. This the director of the Urbaine attributes entirely to the etiquette of the French medical profession. The Urbaine Company had an elegant pavilion at the Paris Exhibition, where it exposed charts and various details concerning life insurances. From the statistics drawn up for that occasion we copy the following instructive figures:—The number of manual labourers or workmen insured by this company amounted to 2431; the total number of years risked, 13,752; the annual number of deaths, 208; giving a death-rate of 1·513 per cent. 14,455 business men were insured; 72,207 years risked; 920 died; the death-rate being equal to 1·274 per cent. With the exception of medical men, there were 4759 members of various liberal professions insured; they risked 21,738 years; there were 246 deaths, and the death-rate was equal to 1·132 per cent. The number of artists and men of letters insured amounted to 374, risking 1444 years. There were 24 deaths, giving the highest death-rate as yet mentioned—namely, 1·662 per cent. With these figures we now compare the record of medical men—namely, 522 insured, 2833 years risked, 28 deaths, being the lowest death-rate recorded—namely, 0·992 per cent. It will be seen that the medical profession holds a very low place in these statistics.

From the above figures it will be seen that out of 5655 members of the liberal professions who had insured their lives only 522 were doctors in medicine, and a very large proportion of these were foreign doctors. Addressing ourselves to the chief of the Paris Bureau of the Compagnie d'Assurances Générales, we found full confirmation of the information gathered from other sources. Here, again, we were told that of the liberal professions the medical profession had most neglected to take out life insurances. In the Paris office of this company there are between six and seven hundred insurance policies taken up every year. Out of this number there are not ten who belong to the medical profession. Here, as well as with the other companies, a great number of teachers are insured, but medical men are pronounced to be, in this respect, the most hopeless and backward class of the community. In the rare cases where insurances are effected by medical men, the system of mixed insurances is gaining in favour. Dr. Lereboullet, who is medical adviser to Le Monde and La Foncière insurance companies, and was selected as reporter on the question of insurance by the Association Générale des Médecins de France, is equally despondent on the subject. In his opinion a much larger proportion of engineers insure their lives, for though representing two important companies, Dr. Lereboullet hardly ever hears of a professional colleague applying for a policy of insurance.

What, then, happens when a French doctor dies leaving his family without resources? For reasons already explained, this is not so likely to happen in France as in England. Still it does occur sometimes. There is the Association Générale des Médecins de France, which is supposed to give relief in special cases of distress, and to which a very large number of doctors subscribe. We have heard, however, very much dissatisfaction expressed with regard to this organisation. It is urged that, instead of helping members of the profession in an efficient and generous manner, the relief given is absurdly small, and the society's chief object seems to be to capitalise its income. It has a reserve fund of about £70,000, and has determined not to be over-generous till this has reached the figure of £80,000. Whether such policy is right or wrong, we do not propose to discuss at present; but what it is necessary to insist upon is the fact that, right or wrong, the provision made, and the method of assistance adopted, are altogether insufficient.

Last Sunday, at the Grand Hotel, a delegate meeting was held of the Union des Syndicats Médicales de France, and of the Société du Concours Médical. The latter body consists of 3430 members, and the Syndicates' Union has, we believe, a somewhat larger membership. The object of the former body is to organise medical men into a sort of trade union, combined, like workmen's trade unions, with a benefit fund, to provide assistance in cases of illness or death. The French Government does not, however, view this movement with favour, and while the law on Syndicates of 1884 recognises the right of workmen to constitute trade unions, it distinctly denies to the medical profession the same right. The Société, whose membership exceeds 4000, and whose delegates met at the Grand Hotel last Sunday, is a society formed without the pale of the law, is not legally recognised, and presumably its funds cannot be legally protected. Again, the question of professional unions among medical men in France, or in any other country, is a very important and interesting one, which we will not now attempt to discuss. A great portion of the discussion held by the delegates at the Grand Hotel was devoted to matters relating to insurance not so much of life as against illness. It must be confessed that the delegates, for the most part provincial medical men with a rural practice, displayed great ignorance of the entire question; and we may rest assured that they have still much to learn before they are capable of taking the matter into their own hands. Yet the necessity for some form of insurance was rendered painfully evident by the revelations made by some of the speakers. One doctor insisted that in rural districts it was often difficult to earn, in fees for consultations, more than £40 a year. The rural doctor who earned 3000 fr. (£120) was considered a notability, a man of mark, and congratulated as being exceptionally successful. Yet how is it possible on so slight a sum to economise enough to make provision for a family, especially in case of sudden premature death?

During another portion of the discussion the question came up as to the sum paid by insurance companies as fees to rural doctors who give certificates in cases of accidents, and it was proposed that an agitation should be organised to obtain an augmentation in the scale of these fees. One delegate rose to oppose this proposal. A well-known insurance company paid him 7 fr. in cases of accidents, and for this he had to give two certificates, the first relating to the accident itself, the second certifying that the patient was cured. On an average this necessitated three visits, and thus he earned about 2 fr. 25 centimes per visit, or 1*s.* 10½*d.* As he was certain of being paid, and as this certainty was in no wise the case with respect to his ordinary patients, the occasional employment given him by the insurance company was very welcome, and he was convinced there were other doctors less prosperous than himself very willing to undertake this work if he gave it up. Another delegate rose and declared that the fees he received from an insurance company varied from 10 fr. to 6 fr., and he likewise was not inclined to risk the loss of this occupation by joining in an agitation the issue of which was not at all certain. The proposal therefore dropped, but the discussion was instructive as showing how very small must be the income of doctors who practise in rural districts of France, and, therefore, how necessary it is that they should seek to provide against accidents, early death, &c., by insuring their lives. From what has already been said, and from the evidence given by the directors of various insurance companies, it has been seen that it is precisely the doctors who have a small country practice who are the most prone to insure their lives. Still the number is much smaller than we had a right to expect, considering how indispensable such precautions must be to men who earn incomes lamentably small. Fortunately the question of insurance is now being more actively discussed among the

medical profession than it has ever been before. The result is as yet very insignificant, but we are only at the commencement of a general awakening. A due sense of the gravity of the question is just beginning to dawn on the French members of the medical profession.

LIFE INSURANCE AND THE MEDICAL PROFESSION IN GERMANY.

THE question of the improvement of the economic circumstances of physicians has been much ventilated in Germany, both in the medical press and in the numerous medical societies, and this question is all the more important at present, as the conditions under which German medical men earn their living, already difficult, are becoming more and more so in consequence of the socio-political legislation, especially the Sick Funds Act of 1883.

The efforts to remedy this state of things in Germany are of two kinds: some are directed to the support of necessitous but deserving medical men and their widows and orphans by so-called Support Funds founded by the medical profession, while the purpose of others is to induce medical men to protect themselves and those dear to them from economic distress by insuring their lives, on the principle that the Support Funds are intended only for those who have neglected to make such provision in time, or have been prevented by contrary circumstances from doing so. That insurance really is a sufficient safeguard in most cases cannot be doubted, and many provident medical men in Germany have availed themselves of it. How great their number at present is could be at least approximately ascertained by application to the German Life Insurance Companies.

It deserves special mention that several associations of medical men have been formed, and have concluded contracts with insurance companies, with a view to securing better conditions. One of the oldest institutions of this kind is the Insurance Society for German Medical Men, founded in the beginning of the seventies by the Medical Society of Westphalia, which concluded a contract with the New York Germania in Berlin, by which the said company bound itself to pay the society the following provision for each insurance of one of its members:—(*a*) On all really paid premiums—(1) 15 per cent. in the first year of the insurance; (2) 5 per cent. in the following years; (*b*) the usual medical examination fees, provided that the examining physician consents to dispense with his remuneration in favour of the society's fund, which of course he always does.

Out of these payments the society has formed a fund, mainly for the support of members who are unable to pay their premiums when they fall due, but also of necessitous members and the families of former members. This fund amounted at the end of last year to 18,263 marks (i.e., shillings), while the number of the members was only 39, that of the insurances 48, and the fund had been diminished during the said year by contributions to the claims of four premiums, amounting in all to about 790 marks; certainly a very noteworthy success! Similar contracts have been concluded by other medical associations with other companies. The number of their members and the conditions are not yet publicly known, but would probably be stated by the insurance companies on inquiry. There is reason to believe that the Nordstern, Gotha, Magdeburg, and Iduna companies are among those that have signed such contracts. The smallness of the number of the above-mentioned insurance society cannot fail to strike the reader. It is due to the great indifference of physicians to the interests of their profession and to the circumstance that many physicians, as medical advisers of certain companies, feel bound to effect insurances with them.

In other respects the mutual relations between medical men and life insurance companies in Germany may be regarded as on the whole satisfactory. The resolutions agreed upon between them at Eisenach have hitherto stood the test of experience. They are as follows:—

The German Association of Medical Societies recommends to the medical societies the following resolutions agreed upon with the Society of German Life Insurance Companies at Eisenach, on June 10th, 1874:—

I. The giving of certificates for life insurance companies is not refused by family physicians, provided that the following conditions be complied with: 1. The candidate for insurance must have declared in writing that he empowers the physicians who are treating or have treated him to give the insurance company full and unbiased information on all points, the elucidation of which with reference to the state of his health seems desirable to the company, and that he also empowers the insurance company to procure this information itself direct from the physicians. 2. Assurance must be given to the physician applied to for the certificate that the candidate has given the authorisation mentioned under 1. 3. The formula of the certificate shall contain mainly questions relating to the patient's own communications to the physician. The drawing up of such a certificate requires no previous examination of the candidate. 4. The certificate must not be asked for by the agents of the company, but by the company itself, and is sent by the physician direct to the company. For the sake of the secrecy which the companies are bound to observe, such certificates must not be shown either to the agents, to the candidate, or to the company's medical adviser in the place where the giver of the certificate is domiciled. Violations of secrecy on the part of life insurance companies or their agents will be published as warnings to the medical public. 5. The insurance company pays the fees for such certificates direct to the physicians who give them, and in no case charges special costs for them to the candidate's account. The fee for such a certificate is five marks, or is agreed upon between the parties.

II. The determination of the conditions for the fulfilment of the functions of the medical adviser of an insurance company is no affair of the medical societies, but of the said medical men and the said company between themselves.

DESCRIPTION OF THE NEW LIVERPOOL ROYAL INFIRMARY.

THE ancient history of the Liverpool Royal Infirmary having already appeared in THE LANCET renders any allusion to it quite unnecessary in a description of the new building—a task enough in itself. To enable those who are not familiar with Liverpool—as well as those who are—to understand the site of the new building, the following brief details will suffice.

The building is situated almost exactly in the centre of the city. Running east and west are two leading thoroughfares nearly parallel to each other, named respectively Brownlow-hill and Pembroke-place. Joining them north and south are Ashton-street and Brownlow-street, enclosing an irregular square, which is subdivided into two nearly equal halves by another street, Dover-street, which runs east and west, joining Ashton-street with Brownlow-street. The new infirmary is bounded on the north by Pembroke-place, where its frontage is; on the south by Dover-street. Ashton-street is the eastern and Brownlow-street the western boundary. The site comprises not only the whole of that of the late infirmary, but also that occupied by a narrow thoroughfare (Pembroke-gardens), and of the frontage, a little marred by some unsightly old buildings, which will, no doubt, in the course of time be removed.

The buildings consist of the central block, situated in Pembroke-place, containing the administrative and resident staff, board-room, secretary's office, chapel, &c. These are all quite separated from the wards, below by a corridor, above by an open terrace on the first floor, and by a light iron gallery on the second floor. The new building was planned by Mr. Waterhouse, R.A., the well-known London architect, whose design is characterised on the one hand by the absence of all unnecessary external adornment, and on the other by an excellence and a completeness of internal arrangement which make the new institution at once one of the cheapest and most perfect hospitals in the kingdom. It was desirable so to arrange the space at disposal as not to have the blocks for wards of more than two storeys in height, while at the same time to leave ample space for recreation grounds. It was also requisite to have a frontage to a large thoroughfare, so that the infirmary should not, like its predecessor, be hidden from view. All these points have been carefully attended to. There is an extensive and handsome frontage to Pembroke-place, which is a busy

thoroughfare with tramcars running past every few minutes to and from the river and principal streets to the eastern suburb of Wavertree; while within a few yards eastwards of the new infirmary is a junction of seven thoroughfares leading from all parts of the city. The situation, therefore, of the new infirmary is all that could be wished so far as convenience is concerned. But this is by no means all. Dover-street, which, as we have seen, is the southern boundary, contains also the main entrance to the school of medicine, students being thus enabled to pass from lecture to hospital and from clinical to class lecture without loss of time. The local terminus of the London and North-Western Railway is within a few minutes' walk, and the neighbourhood is free from the smoke-laden atmosphere which prevails in other parts of the city. The site is therefore as salubrious as that of a city hospital can be, and convenient to everybody connected with it.

The materials employed in the erection of the infirmary were grey brick and terra cotta. These have the effect of making the building brighter and less heavy than the old one, the brick in course of time becoming dull brown, while after every shower the terra cotta resumes its original hue. These materials have also an advantage over stone in lending themselves more readily to points of adornment, an advantage of which the architect has fully availed himself. For the benefit of the inmates abundant accommodation for their recreation has been provided, there being no fewer than six large airing spaces around, three running north and three south. Viewed from any point, the outside of the building has a very pleasing appearance, the south end being, perhaps, the most so, while the frontage is also pleasing in spite of the eyesores already alluded to. Their appearance ought to tempt some wealthy citizen to buy them out at any price.

It is, however, the inside that will excite the most interest in the minds of medical readers, and even medical visitors have been alike surprised and gratified to see how carefully every detail has been studied, how fully every modern improvement has been utilised, how completely advantage has been taken of every hint derived from English and continental hospitals.

To understand the interior thoroughly it must first be stated that a large corridor runs tranversely from east to west, forming a sort of backbone to the building. From one side of this corridor three long parallelograms extend southwards, abutting on Dover-street. From the opposite side depend two circular wards built laterally, with a parallelogram in the middle. These are a novel feature in the construction of English hospitals, though, as is well known, they have been frequently adopted on the Continent, and at Antwerp a large municipal hospital recently opened consists entirely of circular wards. It will be interesting to watch the results. In the circular wards the heat and light are distributed more equably, and the absence of corners possibly secures them against the accumulation of foul air. It was felt, however, that while admitting all the advantages of the circular principle, it would be unwise to adopt them exclusively. The chief wards are all of large size, the parallelograms having accommodation for thirty, and the circular wards for eighteen, patients.

A glance at the floors, walls, and ceilings of all the wards and corridors shows what care has been taken to avoid that peril of old hospitals—the impregnation of all three with germs of disease as a direct result of their composition. At a greatly increased cost the walls are all lined with glazed bricks, carefully laid by trained workmen; the bricks are of various colours, harmoniously mingled, neither fatiguing the eye nor causing any glare. In the corridors the blending of the white and pale green bricks in the formation of a series of arches has produced a most striking and pleasing effect. The ceilings are made of Keene's cement—and the floors have a groundwork of concrete, on which oak blocks, having a waxed and polished surface, are laid. In a word, everything possible has been done to make the building germ-proof.

The sanitary details were left to Mr. Rogers Field of London. The drains are so arranged that at any time a given portion can be inspected, and any flaw or defect discovered without trouble or delay. It is hardly necessary to state that no drains exist beneath any part of the building, and where the pipes debouch from it into the street sewers, traps are placed to prevent the ascent of foul air into the building. The piping was selected with the greatest care from Doulton's works, and as it was laid every few yards was subjected to the severest test, with a view to the detection of any defect which might exist. The baths, lavatories, w.c.'s, and sink for emptying bed pans &c. are all lodged in towers which communicate with the wards by narrow passages having self-closing swing-doors. The windows in the passages are "louvred," so that a continual current of air cuts off these sanitary towers from the wards. Of course all pipes pass outside the building, and are so ventilated and trapped that no sewer air can possibly enter. Passing on to the important subject of ventilation, the committee wisely resolved to rely as much as possible upon the old tried system of window ventilation, while availing themselves also of a newer system. In warm weather the foul air will find exit by the windows, and in cold weather by extraction shafts. The shafts run into the central tower, where, at a high level, a constant source of heat will be maintained, creating a continuous upward current. The building will be heated both by open fire and steam; heating apparatus having been fitted throughout the building, two fires being in each long ward and one in each circular ward. The chimneys are encased in a ventilating shaft, and the heat they impart creates the suction necessary for carrying off the foul air. Light being so essential in a hospital, as well as beneficial to everyone, the wards are all models in this respect, the bright, pleasing effect of this striking one on entering each ward. Each bed is situated between two windows. It was decided, after much consideration, to have gas instead of the electric light, though the latter will not be lost sight of, should it in future be considered desirable.

Attached to each ward and situated between it and the main corridor are a series of service rooms. One of these is a dining-room, in which all patients able to leave their beds will have their meals. Another of the service rooms is fitted up with galvanised iron racks, in which the clothes of the patients will be kept instead of being stowed away in presses in the wards. A separation ward has also been provided where patients who are delirious or noisy, or who have developed symptoms of any infectious condition, will be at once isolated. The head nurse of each ward—the only official who sleeps in the hospital proper—has a room adjoining the ward. The baths and lavatories are on one side of the building at the end of each ward; the w.c.'s, urinals, &c., on the opposite side. The closets are all wash-out basins with polished hinged seats, and flushed out with a two-gallon cistern, which acts on the chain being pulled and empties itself, not requiring the, to many patients, fatiguing process of holding down the chain the whole time. The arrangements for emptying and thoroughly cleansing bedpans are admirable, enabling this to be done almost instantaneously. There is also an excellent arrangement whereby any bed-pan or utensil which may be kept for the physician or surgeon can be placed in a small grated recess outside the inner wall, so as to be perfectly inoffensive. The baths are made of Mourbridge fireclay, enamelled, and the urinals of the same material, made by Doulton.

Opening off the main corridor is a large operating theatre. Everything has been done here to ensure a steady and abundant light. Access to the students' gallery is obtained from the higher storey of the building, while the surgeons and patients enter the well from the lower floor. Patients will be conveyed from the wards to the anæsthetising room, adjoining the theatre, in a light carriage, and when thoroughly under the influence of chloroform or ether will be lifted on to the operating-table. By this means the patient will be spared as much distress as is possible. In addition to the large theatre is a smaller one for operations requiring time and delicacy, which is exceptionally well lighted. Beneath the large theatre is the clinical lecture-room, thus rendering the lecturer for the time being independent of the operating theatre, a great boon both to him and his colleagues.

The out-patient room is situated beneath the central ward, to the north of the main corridor. Here, too, are situated a number of smaller rooms, where patients can be examined by the physicians, surgeons, and resident staff, and will be admitted as in-patients, or directed to attend as out-patients according to the nature of the case. Out-patients will come and leave without communicating in any way with the in-patient department of the infirmary. At one end of the out-patients' room is the dispensary, so situated that from one side the out-patients will obtain their medicine, while from the other the nurses will be supplied with that required for the in-patients.

The chapel is the one solitary part of the new building on which there has been any display of ornament or of decoration. The money required for this purpose was mostly given specially and voluntarily. The whole interior, both pillars and walls, has been tastefully lined with tiles of a sober colour, giving to the place a subdued and impressive appearance. There is ample accommodation for the resident staff and patients, while seats can always be provided for visitors.

The basement floor of the middle south ward, on account of its height, was found to be useless except for storage purposes, and as it was not required for these (there being already ample room provided), this was converted into a recreation hall. It will seat between 200 and 300 persons, and will possess all the requisites of a perfectly arranged theatre. In it musical and other entertainments, calculated to relieve the monotony of hospital life, will be held.

The entire separation of the administrative department from the hospital proper has been already noticed. The block of buildings which contains the former is situated in what is at present a somewhat noisy thoroughfare, from which it separates the patients. It is probable, however, that the city authorities may be induced to lay down a noiseless pavement, which will enable the inmates to enjoy their well-earned repose, as well as separation from hospital air, however well ventilated. This block is five storeys in height and presents a pleasing appearance to a very unpicturesque thoroughfare. It has a frontage of 184 feet. On the ground floor are the entrance hall, patients' waiting-room, board-room, and offices; the second floor contains the rooms of the resident medical staff, each of whom has a bedroom and private sitting-room. There are also the lady superintendent's rooms, and a room for the use of all for meals, &c. The second floor contains the bedrooms of the nurses on duty in the infirmary except the head nurses, who, as we have seen, sleep near their wards. The third floor is devoted to the servants and wardmates, and the fourth contains the kitchens. This is a new departure from the general arrangement of this part of a hospital, and it will be interesting to watch the result.

The separation of the male and female wards is effected not, as usual, by partition doors, but by floors. Those on the first floor are for women; those on the second for men. Each physician and surgeon has his own male and female ward, except that two of the physicians share one ward between them. The Thornton ward is under the obstetric physician for gynæcological cases, and has two small theatres. There are also small wards for special cases, the whole number of beds being 290.

Great judgment has been shown in the arrangements of the mortuary and post-mortem room, which are detached from the main building, and situated along Ashton-street, the eastern boundary. The mortuary presents externally and internally the appearance of a small chapel. Instead of the hideous slabs generally in use, the bodies will rest on what at first look like beds, but which have been specially prepared for the purpose. Every detail shows forethought, even the sheets and handkerchiefs for covering the bodies having been hand-made, and showing most elaborate work. This consideration for the feelings of the poor, who are acutely sensitive in all that relates to the dead, will be greatly appreciated. The post-mortem room has ample accommodation for the pathologist, his assistants, and a goodly array of students.

Great care has been taken that the furnishing shall be of the best materials. The beds are of the newest design for hospital use, and the furnishing of all the rooms has been done so as to be both substantial and pleasing to the eye.

In conclusion, it may be truly said that all who have aided in the erection of this new infirmary have shown by the results of their labours that it has been a labour of love, and that they have spared no pains to ensure that it shall be in all respects a model infirmary, a pattern for others to follow. While it would be invidious to particularise, a word of praise may be fairly given to Colonel A. H. Brown, M.P., the president, and Mr. H. B. Gilmour, the chairman of the committee; to Mr. Mitchell Banks and Dr. Alexander Davidson; to Mr. Waterhouse, the architect; and Messrs. Holme and Green of Liverpool, to whom the contract was given.

During Thursday and Friday, the 30th and 31st ult., the infirmary was open to the public at an admission charge of one shilling; on the 1st inst. it was sixpence. On the 3rd they were again admitted at a shilling, and on the 4th at sixpence. Upwards of 10,000 availed themselves of this opportunity of seeing the "new infirmary," and several hundred pounds were added to the funds.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Farnham Rural District.—This district has several times been the seat of diphtheria outbreaks; it was so in 1888 and 1889, but by the close of the year the disease seems to have come to an end. Mr. Lorimer disagrees with the views taken by THE LANCET as to the condition of the Blackwater and its connexion with these recurring diphtheria prevalences, but he admits that local investigations have thrown no light on the causation of the disease, and hence it seems somewhat premature to set aside the views of others; and this the more so since the condition of the Blackwater has been thoroughly unwholesome and dangerous for years, and insanitary conditions of many similar sorts have elsewhere been identified with persistence of diphtheria and sore-throat. When such conditions have been thoroughly remedied, and when a hospital for infectious diseases has been provided for the isolation of first attacks, then this authority will have taken some decided steps towards preventing a disease which their own health officer admits to have been more or less endemic for some time. The general death-rate for 1889 was 12·6 per 1000.

Winchester Urban District.—This city had in 1889 its lowest recorded death-rate—namely, one of 14 per 1000 living. Scarlatina was on several occasions checked by isolation of early attacks in the Victoria Hospital; and the same institution served usefully to stay the spread of diphtheria. In an account of the general sanitary circumstances of the district, Mr. Thomas Langdon states that the condition of the sewers has been materially improved by the use of Keeling's gas destructor ventilating shafts, a further number of which have been put up. A separate report is given as to the Victoria Hospital, and from the list of the cases which have been admitted into it for isolation purposes, it is evident that its administration is universally regarded with favour.

Lytham Urban District.—Lytham not only maintains a satisfactorily low death-rate, averaging 13·9 per 1000 for the last ten years, but the zymotic rate averaging 0·9 shows a marked absence of some of the more preventable diseases. The water-supply has been complained of, but the objections to it are said to be entirely removable by filtration; and as the company supplying it do not do this, Mr. Eason recommends domestic filtration as the only alternative. But such an alternative should not exist; domestic filtration is rarely satisfactory, since house filters often get choked with matters which do the water passing through them more harm than good, and the authority should press the company to give a supply which needs no home processes of purification to fit it for ordinary domestic purposes. The disposal of sewage also needs to be further dealt with, otherwise there is risk of some serious nuisance at the outfall and in connexion with the Liggard brook.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5194 births and 3881 deaths were registered during the week ending Nov. 8th. The annual rate of mortality in these towns, which had been 20·6 and 22·0 per 1000 in the preceding two weeks, declined again last week to 20·8. The rate was 20·5 in London and 21·1 in the twenty-seven provincial towns. During the first six weeks of the current quarter the death-rate in the twenty-eight towns averaged 20·6 per 1000, and exceeded by 0·6 the mean rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 12·7 in Brighton, 14·7 in Nottingham, 15·9 in Leicester, and 16·0 in Derby; the

highest rates were 25·0 in Cardiff, 25·3 in Birkenhead, 28·8 in Bolton, and 29·3 in Manchester. The deaths referred to the principal zymotic diseases, which had declined in the preceding three weeks from 646 to 523, rose again last week to 541; they included 175 from measles, 86 from diarrhœa, 85 from scarlet fever, 74 from "fever" (principally enteric), 73 from diphtheria, 48 from whooping-cough, and not one from small-pox. The lowest death-rates from these diseases were recorded in Halifax, Derby, Portsmouth, and Huddersfield; the highest in Oldham, Bolton, Manchester, and Norwich. The greatest mortality from measles occurred in Sheffield, Brighton, Manchester, Cardiff, Bradford, Bolton, and Oldham; from scarlet fever in Manchester, Sheffield and Liverpool; from whooping-cough in Sunderland and Norwich; from "fever" in Cardiff, Plymouth, Birkenhead, and Norwich; and from diarrhœa in Blackburn. The 73 deaths from diphtheria included 50 in London (the largest number on record), 5 in Salford, 4 in Liverpool, 3 in Manchester, 3 in Newcastle-on-Tyne, and 2 in Nottingham. No death from small-pox was registered in any of the twenty-eight towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of last week was 2122, against numbers increasing from 1427 to 2110 on the preceding eleven Saturdays; the patients admitted during the week were 188, against 203 and 247 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding four weeks from 197 to 450, further rose last week to 465, and were 50 above the corrected average. The causes of 75, or 1·9 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Oldham, Leeds, Sunderland, and in four other smaller towns. The largest proportions of uncertified deaths were recorded in Leicester, Liverpool, and Brighton.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had risen from 18·0 to 21·8 per 1000 in the preceding five weeks, declined again to 21·0 during the week ending Nov. 8th, but slightly exceeded the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 16·3 in Dundee and 16·8 in Aberdeen to 26·5 in Leith and 27·0 in Paisley. The 543 deaths in the eight Scotch towns showed a decline of 21 from the number in the preceding week, and included 15 which were referred to whooping-cough, 14 to diarrhœa, 13 to scarlet fever, 13 to diphtheria, 10 to measles, 7 to "fever," and not one to small-pox. In all, 72 deaths resulted from these principal zymotic diseases, against numbers increasing from 74 to 87 in the preceding three weeks. These 72 deaths were equal to an annual rate of 2·8 per 1000, which slightly exceeded the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 16 in each of the preceding three weeks, were 15 last week, of which 9 occurred in Glasgow. The 13 deaths referred to scarlet fever were within 2 of the number in the previous week, and included 8 in Glasgow. The fatal cases of diphtheria, which had increased in the preceding four weeks from 5 to 18, declined again last week to 13, of which 4 occurred in Glasgow, 4 in Edinburgh, and 2 in Paisley. Of the 10 deaths from measles, 6 were recorded in Glasgow and 4 in Greenock. The deaths referred to different forms of "fever," which had been 11 and 6 in the preceding two weeks, were 7 last week, and included 2 in Glasgow and 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in the eight towns, which had been 130 and 118 in the previous two weeks, rose again to 122 last week, but were slightly below the number in the corresponding week of last year. The causes of 50, or more than 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the preceding five weeks from 19·4 to 25·3 per 1000, declined again to 20·7 during the week ending Nov. 8th. During the first six weeks of the current quarter the death-rate in the city averaged 21·8 per 1000, the rate for the same period being 19·3 in London and 18·7 in Edinburgh. The 140 deaths in Dublin showed a decline of 31 from the number in the preceding week, and included 8 which resulted from "fever," 4 from diarrhœa, 2 from measles, 1 from diphtheria, and not one either from small-pox, scarlet fever, or whooping-cough. Thus the deaths referred to the principal zymotic diseases, which had declined in the previous three weeks from 23 to 16, further fell last week to 15; they were equal to an annual rate of 2·2 per 1000, the rate from the same diseases being 2·6 in London and 1·0 in Edinburgh. The deaths referred to different forms of "fever," which had been 6 in each of the preceding three weeks, rose to 8 last week, and exceeded the number recorded in any week since the beginning of March last. The fatal cases of diarrhœa, which had declined from 13 to 5 in the previous three weeks, further declined to 4 last week. The 2 deaths from measles exceeded the number in any recent week. The 140 deaths in the city included 28 of infants aged under one year, and 33 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a marked decline from the numbers in the previous week. One inquest case and 5 deaths from violence were registered; and 37, or more than a fourth, of the deaths occurred in public institutions. The causes of 11, or nearly 8 per cent., of the deaths in the city were not certified.

THE SERVICES.

Surgeon-General J. G. Faught has been appointed Principal Medical Officer on the Staff at Aldershot.

ARMY MEDICAL STAFF.—Surgeon-Major Wm. Hamilton Briggs retires from the Service, receiving a gratuity (dated Nov. 8th, 1890); Surgeon-Major Patrick Aloysius Hayes retires from the Service, receiving a gratuity (dated Nov. 8th, 1890); Surgeon Claud Herbert Clabburn, M.B., F.R.C.S. Edin., retires from the Service, receiving a gratuity (dated Nov. 12th, 1890); Brigade Surgeon Henry Vandyke Carter, M.D., retired list, Bombay Medical Department, to be Honorary Surgeon to the Queen, vice Surgeon-General Sir J. C. Brown, K.C.B., deceased (dated Nov. 8th, 1890).

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Staff Surgeons: Michael Fitzgerald to the *Shannon*, and Herbert Mackay Ellis to the *Cambridge* (both dated Nov. 15th, 1890); John Dudley to the *Impérieuse*, additional (dated Nov. 8th, 1890). Surgeons: John Acheson to the *Brisk*, William Spencer Lightfoot to Plymouth Division of Royal Marines, D'Arcy Harvey to the *Anson*, John Evans Penn to Haslar Hospital, and Jeremiah Sugrue to the *Invincible* (all dated Nov. 8th, 1890); Herbert Holyoake to the *Redbreast* (dated Nov. 7th, 1890).

VOLUNTEER CORPS.—*Rifle:* 13th Middlesex (Queen's Westminster): Acting Surgeon P. P. Whitcombe, M.B., to be Surgeon (dated Nov. 8th, 1890).—20th Middlesex (Artists'): Acting Surgeon R. R. Sleman to be Surgeon (dated Nov. 8th, 1890).

CLINICAL SOCIETY OF MANCHESTER.—At the annual meeting held on Nov. 4th, the following gentlemen were elected officers for the ensuing year:—President: C. H. Braddon, M.D. Vice-Presidents: T. C. Railton, M.D., S. Buckley, M.D. Treasurer: C. H. Braddon, M.D. Librarian, J. F. Le Page, M.D. Committee: B. Addy, M.D.; W. Bain; S. Bishop, F.R.C.S.; H. G. Brooke, M.B.; A. Donald, M.D.; J. Ferguson; A. Hirst, M.D.; J. Holms, M.D.; A. E. Jones, M.D.; H. Lund, F.R.C.S.; G. Pinder; W. Thorburn, F.R.C.S.; A. Wahltuch, M.D.; G. Wright, F.R.C.S.; and H. Boddy, M.D. Auditors: T. S. Sheldon, M.B.; H. W. Wise, M.B. Secretaries: S. H. Owen, M.D.; A. Hill Griffith, M.D. The retiring president, in replying to a vote of thanks for the services which he had rendered during the past year, remarked upon the flourishing condition of the Society and the excellent work it was doing. The number of members now on the roll amounts to 133, and the attendance both at the afternoon and evening meetings is excellent.

Correspondence.

"Audi alteram partem."

THE LAST MEETING OF THE ROYAL COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—There is one very important point upon which the President argued with me, and upon which I wish to say a final word. Mr. Bryant said that I had forgotten that two-thirds of the fees must be deducted for the expenses of the examinations. It will be remembered that I estimated the amount of these fees paid by Members of the College during the present century to amount to over a million pounds sterling. I see reason now to believe that this estimate is greatly understated, and the point that I wish to allude to is that the President's remark only points the moral for a further and more stringent reform. The reduction which he desires to make from my estimate constitutes a point upon which probably the greatest complaint has to be made concerning the history of the College, for it was this reduction which went into the pockets of the examiners, and it must be borne in mind that throughout the greater part of the period alluded to the Court of Examiners and the Council were synonymous. It is only in quite recent years that men not on the Council have been appointed to the Court of Examiners, and one of the reforms which it is my purpose to advocate, as long as I have anything to do with the politics of the College of Surgeons, is that the holding of a seat on the Council shall be a disqualification for the holding of a seat on the Court of Examiners. It would serve a very useful purpose if we could get at an exact knowledge of the cost per candidate of the examinations for the various bodies. We know perfectly well that in such institutions as the University of St. Andrews, where the examiners are almost entirely extra-mural, the amount paid for examination purposes per candidate is very small, is indeed probably at the minimum. There is great belief, looking at the cost of the examinations of the College of Surgeons, that they form a most striking contrast, and the reason clearly is that the examiners themselves, or the majority of them, have the privilege of fixing the payment for the examinations.

I am, Sirs, your obedient servant,

Birmingham, Nov. 10th, 1890. LAWSON TAIT.

CANVASSING AT THE COLLEGE ELECTIONS.

To the Editors of THE LANCET.

SIRS,—As corroborating your remarks on the abnormal zeal of the friends of a particular candidate at the last election to the Council of the College of Surgeons, your readers may be interested in perusing the following letter. It was type written, and addressed by a distinguished F.R.C.P. to an F.R.C.S., who placed it at my disposal. To how many more it was sent I do not know:—

"MY DEAR SIR,—In the forthcoming election for the Council of the Royal College of Surgeons on Thursday, July 3rd, between the hours of 3 and 4, my friend —— will be a candidate. I have known him from a student as an honourable, upright, and clear-headed man, and few, I think, could be found better than he to serve on the Council. I do not wish to trouble you by asking you to reply to this, but if you can vote for him at the hours mentioned, I shall not only be greatly obliged, but I believe you will be doing a great public benefit.—Faithfully yours, ——."

Comment is unnecessary.

I am, Sirs, yours &c.,

Finsbury-square, E.C., Nov. 11th, 1890. WALTER RIVINGTON.

THE GENERAL MEDICAL COUNCIL AND THE DENTAL PROFESSION.

To the Editors of THE LANCET.

SIRS,—I am sure that every practitioner of dental surgery will thank you for your impartial comments upon Mr. Smale's letter in your issue of Nov. 1st, and I trust you may eventually feel impelled to lend your powerful support to the movement for placing a dentist upon the Medical Council. I do not propose to discuss the question of "special" practice; I would only point out the undeniable fact that many eminent "specialists" have held seats upon the Medical Council. This fact is so obvious that I need not quote any names. Dental surgery is recognised by the State by Act of Parliament, its charter is administered by the Medical Council, and this alone constitutes a *primâ-facie* case for its due representation thereon in the future. I should also like to support the contention of Mr. Turner and Mr. Smale that Dr. Smith, Dr. Stack, and Mr. C. S. Tomes, F.R.S., are duly qualified in medicine and surgery and are on the Medical Register, and I would add to their names those of Mr. Turner and Mr. Smale as being also eminently fitted to hold seats upon the Medical Council. It is quite certain that the administrative faculties of all these gentlemen are ample enough to justify their election upon the Council, whether the subjects to be dealt with are medical, surgical, or dental. We all feel the greatest regret that Sir John Tomes, F.R.S., retired from practice so long ago that he would be ineligible for election, but if he could be nominated, I think you, Sirs, would be the first to admit that "specialism" would be no obstacle to his election.

I am, Sirs, yours truly,

Brook-st., Grosvenor-sq., Nov. 12th, 1890. S. J. HUTCHINSON.

PRISON MANAGEMENT.

To the Editors of THE LANCET.

SIRS,—The annotation in your issue of Oct. 11th on "The Howard Society's Report," which previously escaped my notice, has only now had my attention specially directed to it, hence the delay in the present communication. I do not intend to deal with the report, but only with one or two of your inferences therefrom. There are a good many *ex parte* statements in the annotation, but none of them more unwarrantable than your assertion that "the allotment of one cell to several prisoners is a common thing." I can speak from personal knowledge of several large prisons, and I must say that I do not know of such a thing as the allotment of one cell to several prisoners. This could only occur where there was overcrowding, and I do not think there is at present a prison in England full. Occasionally two prisoners are in a cell during working hours, when one is teaching the other a trade, such as weaving or mat-making, but then the cell door is open and they are under the constant supervision of an officer. In the convict service, and to a certain extent in local prisons, I cannot see how the "gang system" could be abolished, unless you provided an officer for every prisoner who is engaged at work out of his cell. Prisoners who work in association are under the direct control of one or more officers, and they are not allowed to communicate with one another. In the case of prisoners undergoing long sentences it would be difficult to conceive any system of more refined cruelty than the rigid enforcement of the cellular system. It would in my opinion lead to an enormous increase in the number of cases of insanity, and would largely contribute to the mental and physical deterioration of the whole criminal population. Medical officers are now pretty well agreed that strict isolation should not be carried out for a longer period than nine months. The Howard Association tell us that imprisonment should be sharper and shorter. Medical officers who have striven for the amelioration of the condition of prisoners will not contend against shorter sentences, but they will certainly object to more severe discipline.

"In one prison almost all the inmates are in association, and here the result has been a marked excess in the reported number of disgusting immoralities." I have no knowledge of the prison to which this refers, but I very much doubt if there be any other association than that of the "gang system" during working hours. From your statement of supposed cause and effect, one would naturally infer that "disgusting immoralities" took place in the prison, whereas it refers to an unusual number of prisoners convicted of a particular form of crime. In the report the supposed sequence is less strongly, but not more logically, stated, as follows:—"Now for years past the Kent Assizes have had a notoriety for especially foul and disgusting cases. But is this to be wondered at under the circumstances? For the supposed 'House of Correction' has become a school of moral debasement by reason of the ex-

cessive association of its inmates." Such a sweeping assertion as this should not be made without showing that the prisoners guilty of these crimes had been previously in prison, and there received their "moral debasement. Immorality is a very generic term, but the species to which allusion is here made is evidently some form of sexual debasement. No doubt habitual criminals are usually defective in moral and intellectual development, but that they are more prone to sexual debasement than other classes of society I very much question. Their irregular habits of life and poor living do not contribute to sexual excesses; and certainly venereal diseases are not more common among them than among respectable members of the community.

Association in prisons chiefly takes place in the hospitals, and in the wards set apart for epileptics and the mentally and physically infirm. For this the medical officers are mainly responsible, and I think they have a right to expect more sympathetic treatment in the discharge of their onerous and responsible duties than they have received from the leading medical journal. In hospital it is wise to isolate notorious criminals when there is not much the matter with them; but when they are seriously ill, I, for one, think that discipline should give way to the dictates of humanity. Prisoners are human beings, and when "sick and in prison," our common Christianity should teach us that they should be kindly treated. The association of sick prisoners is an important element in effecting their recovery. When in hospital they are not in a frame of mind for corrupting one another, and the kindness which they there receive shows them that they are not regarded as outcasts from society for whom no one has any sympathy. A short time ago there came under my observation a prisoner of an introspective turn of mind, who was in isolation, and who was quickly drifting into melancholia. A few weeks' residence in hospital with other prisoners quickly restored him. I know no hospital in the kingdom where a rigid system of isolation is carried out, and I hope it will be a long time before such refined cruelty is introduced to our prison hospitals.

That a murder should have taken place in a prison is a most deplorable occurrence, and one which required and received a strict investigation, not only, as you say, by the prison authorities, but also by Mr. Justice Grantham at an assize court. This shows the difficulty of having any human system perfect. In prisons every defect is remedied as soon as discovered, and means taken to prevent its recurrence. In respect of management, I believe the prisons will compare favourably with any of the large institutions of the country. Some time ago a murder was committed in one of our large asylums, and the culprit was sent off to prison to await his trial without one word as to his mental condition. Such a casual mode of procedure could not occur in prison, where it is the duty of the medical officer to record any mental or physical peculiarity on the transfer of a prisoner. For many of the improvements in prisons effected during the last twelve years, including better health, lessened death-rate, improved lighting and ventilation, the medical officers deserve some meed of praise rather than your stinging innuendoes.

I am, Sirs, yours faithfully,

JAMES BARR,
Medical Officer, H.M.'s Prison, Kirkdale.

Liverpool, Nov. 10th, 1890.

To the Editors of THE LANCET.

SIRS,—Dr. Vicars, as a member of the executive committee of the Howard Society and one who has "had a wide experience of various prisons during the past twelve years," states that cell association of prisoners is very uncommon. The Howard Society, with Mr. Tallack for its secretary, on the other hand, reports in its journal that the allotment of one cell to several prisoners is a common thing. Accordingly, one would say that this Society's journal is drawn up by its secretary, and not by its executive committee. You, Sirs, in your very influential journal, write that the Howard Society's "claims on public support we would once more heartily commend to our readers, along with its publication." But your readers, noting the above-mentioned discrepancy in the management of the Howard Society, may, after inquiry, come to think that it is a meddlesome and unnecessary association—a Society not justifying its existence, especially as sufficient public safeguards against abuses in prisons undoubtedly at the present time exist.—I am, Sirs, yours faithfully,

Canterbury, Nov. 9th, 1890. PUGIN THORNTON.

*** Nothing was further from our intention than to disparage even indirectly the valuable services of prison medical officers, and we cannot but regret that Dr. Gover and Dr. Barr have thought it needful to protest on their behalf against our remarks, which, in our minds, had no such personal reference, but should rather be associated with the system under which the abuses commented on occur.—ED. L.

THE MIDWIVES' REGISTRATION BILL AMENDED.

To the Editors of THE LANCET.

SIRS,—Will you allow me to call attention to a few of the most serious flaws in the above Bill?

Clause 2 gives the Medical Council the power to frame rules regulating the admission to examinations, course of study, qualification of examiners, method, period, and subject of examinations. The idiotic point is that although such rules are to be drawn up, the Medical Council is not given the power to see that their regulations are carried out. What virgin innocence! Clause 3 makes the County Councils appoint examiners, grant diplomas, and publish a County Midwives' Register. Now what does a county or city council know about appointing midwifery examiners? It would be only a political job. The Medical Council might do so, but then they have stoutly refused to have anything whatever to do with the *administering* of such an Act. Although the County Councils are given the right to grant diplomas, they are forbidden the right to remove midwives guilty of malpraxis &c. from their Register. Another example of virgin innocence! Universities and colleges can take their diplomas from students. Clause 4 says that the Privy Council—not the Medical Council—shall provide for "the supervision of the examinations"! This will be a difficult and expensive task, for there must be over 150 County Councils and county boroughs. Besides, this number may be made up to 500, as Clause 3 (2) provides that persons be examined "within a reasonable distance from the place where they reside."

Clause 6 says a midwife may practise in the United Kingdom, yet Clause 8 places the Scotch and Irish midwives under quite different and unfair regulations. The same clause says midwives are to attend "normal labours only." What is a normal labour? What will happen if they attend at normal labours? Why, nothing; for no penalty is provided! Clause 9 will allow 13,000 old women to enter the Register *without any examination whatever*, and to keep 13,000 unqualified assistants. Clause 16 (2) says that "no private person" is to have the power of prosecuting a midwife without consent of the Attorney-General. As a rule, any person can issue legal proceedings against any other person, and if the judge thinks there has been "vexatious litigation," he makes the plaintiff pay all costs. But the sweet innocence of the draftsman of this Bill takes care that no midwife shall be liable to prosecution. Happy midwives!

I would urge, Sirs, that each local body of doctors meet and protest against this Bill, and forward such protest to their member of Parliament; also that they pass a resolution calling on training schools for midwives to take immediate steps to (*a*) improve the training of pupil midwives, (*b*) lengthen their period of study, (*c*) increase the stringency of their examinations, (*d*) keep a register, and (*e*) grant their diplomas on the understanding that the school possess the power of withdrawing for a time, or for altogether, their diploma from the midwife. It is full time this craze for getting an Act of Parliament is put a stop to. It is now on the carpet that medical and surgical nurses are to be State registered. Is the monthly nurse to have a Bill to herself? What about the masseur and the St. John Ambulance pupil? I shall be glad to hear from anyone willing to take a part in opposing this Bill.

I remain, Sirs, yours faithfully,

ROBERT REID RENTOUL, M.D., M.R.C.S.

Liverpool, Nov. 11th, 1890.

*** We insert to-day the last of several communications from Dr. Rentoul, pointing out what he regards as the "most serious flaws" in the amended Registration Bill.

In some of the objections we agree with Dr. Rentoul. In others he allows his strong feelings to lead him astray. For example, he says that a prosecution against a midwife is not to be allowed to private persons save with the consent of the Attorney-General. The clause he quotes says "with the consent of the Attorney-General, *or of the County Council.*" Surely this is an alternative that should be stated. Again, he makes much of the Medical Council being required to frame regulations from time to time respecting the education and examination of midwives, their examiners, &c., and yet not being granted the power to see that these regulations are carried out. The Medical Council has declined such a function. But power is given to the Privy Council to make regulations for securing the due supervision of examinations and punishing midwives who are disobedient or who act disgracefully, and it is obvious that the Medical Council would have a strong right of remonstrance if the regulations it advises were disregarded. Indeed, Clause 2 gives power to the Council to make new rules. So on throughout. Dr. Rentoul's objections deal with matters of detail, in regard to some of which there should be no difficulty in procuring reasonable amendments. Perhaps his strongest point is the effect of the Bill in putting the existing midwives on to the Register. But will Dr. Rentoul tell us of any instance in the history of legislation where existing practitioners were not similarly treated? Moreover, Bill or no Bill, these women are in practice, have legal rights, and powers of recovery. The whole effect of the proposed legislation is to make the assumption of the title of midwife more difficult than it is now, and to reduce the numbers of a class already too numerous. Surely, everybody must wish to see such a reduction. If Dr. Rentoul thinks it to the interest of the medical profession to continue the existence of the "13,000 old women" (for the most part without fitness or qualification) as midwives, we do not so understand either the interests of poor women or of the medical profession, and we have a strong conviction that if Providence had designed parturient sufferings under an ignorant midwife's attendance to such a nature as Dr. Rentoul's, he would have written a most powerful argument for immediate legislation for improving such practitioners out of existence, which is what the Bill will do.—ED. L.

THE CURE FOR CONSUMPTION.

To the Editors of THE LANCET.

SIRS,—With Koch's recent brilliant discovery man takes another step forward in his evolutionary career, obtains yet a little more control over circumstances, makes yet a little further advance towards complete correspondence with his environment. Nor is it now deemed over-sanguine to predict that this is but the prelude to other triumphs of a similar kind, and that the time will not be long delayed when others of his fell enemies, such as malignant tumours (themselves, who can doubt, parasitic, like tubercle), shall succumb to treatment. An important and oft-mooted question hence now forces itself upon us with peculiar insistance—whether, namely, the human race actually benefits in the long run by those artificial checks upon the operation of natural selection, to the number of which increasing knowledge is continually adding. Manifestly, by artificially rescuing from death those who are prone to disease, we increase the racial predisposition thereto, and lower the standard of health. The individual with a compound astigmatism wears eyeglasses; another, a truss to keep up a hernia; a third, elastic stockings for varicose veins; again, another has been operated upon for vesical calculus; and all probably have been inoculated against small-pox (soon it will be against tubercle too). But the result in any case is not perfect health. There is at the best but a patching and a propping, often felt to be so imperfect that the cry is raised, "Were it not better not to be!" Thus we have to face another question, this time an ethical one. How far is an individual who has been artificially rescued from the death that would have resulted from an innate weakness justified in leaving posterity to continue a like maimed existence? I merely raise the question; I do not in the narrow limits of a letter attempt fully to answer it. All I will say is that the artificial interference with the operation of natural selection does not lead to such disastrous consequences as might at first sight appear. But, with regard to tubercle, I am convinced that it is far more frequently the result of unfavourable circumstances than of inborn weakness, and notably among the poorer classes—in other words, that the soil favourable to the tubercle bacillus is far more frequently acquired than simply inherited. I presume none will deny that among children, at least, the condition of tissue which harbours the tubercle bacillus is generally that afforded by the so-called "strumous" diathesis. But what is this but a more or less faulty state of nutrition, the result of unfavourable external conditions? I have never yet seen in a child an example of this diathesis owning any other source. To put this statement in another way: If we suppose that the strumous diathesis is met with among the children of the very poor in London in the ratio of 20 per cent. (a very low estimate), then I venture to say that if this unhappy percentage were fed from earliest infancy on healthy mother's milk, and subsequently brought up in country air, under perfectly sanitary conditions, the strumous diathesis would be practically reduced to *nil* among them. On the other hand, it must be granted that tubercle may develop in individuals who are in no wise strumous, sometimes striking down some of the apparently most perfect physical specimens of humanity, and I would throw it out as at once a possibility and a hope that in the far future it may be to this class, and to this class alone, that it will be necessary to apply Koch's method. For the strumous diathesis is not the result of an inborn weakness, but of a fundamentally wrong environment, and should surely be dealt with as such.

I am, Sirs, yours faithfully,

Guilford-street, W.C., Nov. 11th, 1890. HARRY CAMPBELL.

CHLOROFORM ADMINISTRATION IN NASAL OBSTRUCTION.

To the Editors of THE LANCET.

SIRS,—If complete nasal obstruction exists, and the mouth be closed, it is obvious that the air-supply is cut off. This sounds like a truism, and yet I am not aware that it has received due attention. It is, I believe, routine treatment, or was, in chloroform narcosis, when the breathing became embarrassed, to open the mouth and pull forwards the tongue; but whether it was fully recognised that the impediment to the entrance of air was frequently caused by obstruction other than that due to spasm of the glottis, a falling back of the tongue, recession of the epiglottis, I am not prepared to say. I was myself until recently unacquainted with the fact.

Perhaps a case will better illustrate the point. A boy, the subject of post-nasal growths, was anæsthetised, or rather the attempt to anæsthetise him was made in the ordinary way by means of a Skinner's apparatus. I say attempt, for from an early period the breathing became embarrassed, and but little air or chloroform vapour was inhaled. The respiration was shallow, there was much sinking in above the clavicles, and these symptoms were not materially relieved by elevation of the chin. Some time before the conjunctival reflex was abolished breathing became imperceptible; the chloroform was removed, the chin strongly elevated, and breathing somewhat deepened again. The mouth all the time was tightly closed, being opened eventually with difficulty. The moment, however, that this was accomplished the breathing became free and he was quickly narcotised. Later, in the course of the operation, an accident occurred which again proved the necessity of the open mouth. The gag slipped, the mouth closed, and the breathing immediately became embarrassed again. It was simply open mouth, for the tongue was not interfered with, neither was the chin raised. I take it, in such cases as these, the ordinary method of raising the chin must be abandoned, for, the nose being obstructed, elevating the chin will close the mouth, and thus cut off the only air portal. If a gag be inserted and but partly opened, the difficulty will be overcome. The case

I have described is a typical one, but before this came under my observation I had seen several cases which illustrated the point in only a lesser degree.

I am, Sirs, yours obediently,

George-street, W., Oct. 27th, 1890. F. G. HARVEY.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Hospital Abuse Inquiry.

AT a meeting of this committee, held on the 12th inst., his Honour Judge Chalmers presiding, it was stated by one practitioner, of twenty-five years' standing, that he never went into the out-patients' department of the hospitals without meeting some who were well able to pay for medical aid. Many persons drove up in cabs. He had seen seven or eight cabs outside the general hospital at a time. Mentioning the obstetric officer's name at this hospital, he said that he would not be surprised to see on his day a number of women with silk dresses and gloves going to see that gentleman. He gave other instances from his own experience where patients in good position obtained relief from the hospitals, and considered that the basis should be on the wages of the individual certified by the master.

Midland Medical Society.

Dr. McEwen of Glasgow gave the inaugural address before this Society on Wednesday last; there was a large audience. Four cases of aneurysm—of the aorta, the left subclavian, the abdominal aorta, and the femoral and iliac artery—were narrated, and the operation of the author described. This consists in the introduction of a fine steel pin into the sac, and sufficient irritation of the interior at places, to cause formation of white thrombi. Of the four cases mentioned, two recovered, one was much relieved, and one died. Much interest was shown in the address, at the conclusion of which a vote of thanks was moved by Mr. Oliver Pemberton and heartily accorded.

Munificent Gift to the Medical Charities of Birmingham.

Mr. G. F. Muntz, of Umberslade, has vested in trustees securities of the value of £21,000, the annual income of which is to be distributed among the medical charities of the town. Certain conditions are attached, and the institutions not to participate are clearly laid down—viz., (1) hospitals or asylums for the insane; (2) institutions or homes for convalescents; (3) institutions primarily supported by public rates; and (4) institutions carried on as commercial enterprises or for private profit. In case of the last-named condition, provision is made not to exclude institutions receiving paying patients if at the same time the deserving poor are treated either gratuitously or at a nominal cost. Certain other contingencies are allowed to be taken into consideration—namely, the circumstances under which such institution shall during the preceding financial year have invested by way of permanent endowment any part of its ordinary income, the objects and purposes of the institution as supplying the public want for the time being, the general character and status of the patients, and the provisions for ensuring the benefits of the institution to the deserving poor; the amount of voluntary annual subscriptions as showing the appreciation of the public of the need of the institution and the public confidence in its management; the income receivable from permanent endowments, and the average cost of patients of any recipient institution as compared with the average cost of patients in institutions having similar objects located in other towns, in cases where information is available. Ten trustees are appointed.

Up to the present time the Hospital Sunday collection for this year amounts to £4209 9*s.* 2*d.*

Birmingham, Nov 13th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

A New Park for Newcastle-on-Tyne.

MR. W. D. CRUDDAS, a partner in the celebrated Elswick works of Sir Wm. J. Armstrong, Mitchell, and Co., has presented a piece of land to the Corporation of Newcastle to be used for ever as a park and recreation ground. The land presented is valued at £12,000; but Mr. Cruddas's gift is all the more valuable as it is in a populous and working-class district of the town, where there was, but for this gift, little chance of ever obtaining breathing room in the way of a park.

Newcastle Royal Infirmary.

At a late meeting of the governors of the Royal Infirmary, Dr. Bruce presiding, Dr. Baigent, house surgeon, was called into the board-room, and received the warm congratulations of all present on having as the most distinguished graduate of the year carried off the Gold Medal given by the University of Durham for that prize. Dr. Philipson spoke of the honour achieved by Dr. Baigent for his essay, which was based on original research, and which was the best of the productions of twenty-eight candidates.

Newcastle Hospital Collections.

The usual collection in churches and chapels for our local charities was taken on the 26th ult. The weather was so unfavourable that some of the collections were postponed, and others have taken the course of supplementary ones, so it is to be hoped that the fund will not suffer seriously in the long run. On Saturday last the workmen's collection was made, and it is expected from the prosperous state of trade that it will make up for any deficiencies in the places of worship. Last year's was the largest amount ever given by the workmen—viz., over £2000, and it exceeded that collected in the churches.

A Brave Young Lady.

The other day, while a servant girl in Morpeth was engaged in cleaning an upstairs window she was heard to scream, and was seen in the act of falling from the ledge on which she was sitting by Miss F. Arkless, who was passing at the time, and who with great presence of mind ran forward to the place, knelt down on the pavement and fortunately was able to catch the poor girl's head in the lap of her dress as she came to the ground. She thus broke the fall and averted what might have been serious consequences. It is fortunate, the papers say, that Miss Arkless received no injury herself from her courageous act. The servant has escaped with bad contusions of the limbs, and is recovering under the care of Mr. Skrimshire, surgeon.

The Health of Whitby.

Dr. T. Tinley, the medical officer of health, has presented a very satisfactory report as to the sanitary condition of this favourite watering place for the last quarter, and says that the death-rate from all causes has been below the average of past quarters. Dr. Tinley says also that the most satisfactory feature in his report is the absence of death from zymotic disease, not one having been registered. There has been no death even from diarrhœa, which is remarkable considering the large influx of visitors to the place in the summer season. Dr. Tinley says that while the death-rate was about 15 per 1000 on the year the birth-rate almost doubles the death rate for the quarter, being 6·7 for the quarter. Dr. Tinley is to be congratulated on the improved sanitary condition of the borough, and it is to be hoped that it will soon emerge from its condition of being regarded as an almost stationary town as regards its resident population, as twenty years ago its population was very little different from the present estimate of about 15,000. Cæsarean section was performed in a case at the Whitby Workhouse on the 3rd inst., mother and child being saved.

It is stated in our papers that by the will of the late Mr. Robert Walters of Eldon-square, in this city, several benevolent and religious societies will receive important bequests, including £500 each to the Newcastle Royal Infirmary and the Dispensary.

Newcastle-on-Tyne, Nov. 12th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENT.)

The New Member for the Universities of Edinburgh and St. Andrews.

SIR CHARLES PEARSON, the Solicitor-General for Scotland, was on Wednesday duly declared to be elected Member of Parliament for the Universities. There was no opposition and therefore no poll.

The Medico-Chirurgical Society of Edinburgh.

This Society held the first meeting of its seventieth

session last week, when Professor Annandale read a paper on wryneck, its varieties, and their treatment; and Dr. W. Allan Jamieson communicated an elaborate clinical study on Dermatitis Herpetiformis. The following office-bearers were appointed for the ensuing session:—President: Professor A. R. Simpson. Vice-Presidents: Dr. Brakenridge, Dr. P. H. Maclaren, and Mr. A. G. Miller. Treasurer: Dr. Francis Troup. Secretaries: Mr. F. M. Caird, and Dr. William Russell. Editor of Transactions: Dr. William Craig. A committee was appointed to approach the other medical and scientific societies in town to see if any conjoint arrangement could be made to obtain a more suitable place in which to hold their meetings.

The Morison Lectures.

Dr. Clouston delivered the first of these lectures on Friday of last week, in the hall of the Edinburgh Royal College of Physicians. The hall was crowded, and the lecture was listened to with marked attention and interest. On Tuesday of this week he gave clinical illustrations at the Royal Edinburgh Asylum, supporting the contentions advanced in his lecture.

Edinburgh and Glasgow Medical Dinner.

A dinner of representative medical men of Edinburgh and Glasgow was held in Edinburgh on Friday of last week. The promoters of the dinner had in view the laudable object of bringing the profession in the two cities into closer relations. On this occasion the chair was occupied by Sir Douglas Maclagan, while Professor Gairdner of Glasgow was croupier. The dinner was served in the New Library Hall of the Royal College of Physicians, which had been lent for the occasion. It is proposed to make the dinner an annual one.

Edinburgh Health Lectures.

The second lecture of this course was delivered on Saturday by Dr. J. B. Haycraft, who took for his subject, "The Importance of Ideals of Health, Beauty, &c., towards Race Progress." Among other things he pointed out that where the conditions of life were such that all-round men could be dispensed with, the sickly and imperfect would take root and flourish, and give their offspring to the next generation. In every manufacturing town there were thousands of posts which could be adequately filled by men and women of feeble bodily health and with a minimum of mental vigour. These were the fit to survive in their conditions, but they were not the best, and these towns might as literally be said to manufacture depraved humanity as to produce carpets or hardware.

Appointment at the Edinburgh Royal Infirmary.

Mr. W. H. Barrett, M.B., has been appointed one of the Pathologists to the Royal Infirmary in place of Dr. A. Bruce, who has been made an Assistant Physician. Dr. Barrett is the senior assistant to the Professor of Pathology.

The Scottish Microscopical Society.

The first meeting of this Society for the session was held in Edinburgh on Friday night last week. Sir William Turner was succeeded by Professor Rutherford as president. The new president delivered an address on "The Tercentary of the Microscope," in which he dealt with the history of the microscope down to the present time.

The Lord Rectorship of the Edinburgh University.

The contest between the supporters of Mr. Goschen and Sir Charles Russell for the Lord Rectorship is being conducted with great spirit by both parties, and has given rise to rather more than the usual amount of electioneering literature. The polling takes place on Saturday.

Health of Edinburgh.

The mortality last week was 81 and the death-rate 16 per 1000. Diseases of the chest caused 25 deaths, and zymotic diseases 8, of which 5 were due to diphtheria. The intimations for the week comprised 16 cases of typhoid fever, 11 of diphtheria, 27 of scarlatina, and 11 of measles.

November 11th.

MEDICAL DEGREES FOR SALE.—Several of our contemporaries quote the *Boston Herald* (U.S.) as printing an exposure of a medical institute at Newberry, Vermont, which sells diplomas in the West at fifty dollars each The institute carries on business by publishing a catalogue of incompetent men with fictitious degrees, who act as professors.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Academy of Medicine.

THE opening meeting of the Surgical Section will take place on Friday, the 14th inst. The President of the College, Mr. H. Gray Croly, who is also President of the Section, has issued invitations to a supper to be held later on the same evening.

Tobacco and Stimulants in Irish Workhouses.

Last week's *Dublin Gazette* publishes the following sealed order of the Local Government Board, which has been sanctioned by the Lord Justices:—"No pauper shall have or consume any tobacco or any spirituous or fermented liquor except where it is ordered in writing by the medical officer for any individual pauper of the sick infirm or lunatic classes, or for any pauper engaged at work of an offensive nature which may render tobacco or a stimulant necessary for the preservation of his health. The medical officer shall set forth briefly in each case the reason for making such order, and his report on the subject shall be laid before the board of guardians at their next meeting." This order will materially lessen the cost of stimulants in the various unions.

Catholic University Medical School.

On Nov. 5th the winter session was opened. The various prizes and exhibitions obtained during the past session were awarded, and an address given by Archbishop Walsh, Chancellor of the University.

Sir John Nugent, M.D.

This gentleman will shortly be presented with a valuable service of silver plate, on the occasion of his retirement from the post of Inspector of Lunatic Asylums in Ireland, an appointment the duties of which he efficiently performed for many years.

Sanitary Certificates.

The Dublin papers report that an important step in the direction of house sanitation has been taken by the Town Commissioners of Bray, the popular summer resort. On the motion of Mr. Breslin it has been resolved to inspect every house in which lodgings are let, and to grant certificates where all needful sanitary conditions are complied with, the certificates to be renewed at the commencement of every season.

It is stated that forty candidates were rejected at the Supplemental Preliminary Examination R.C.S.I., which must have an appreciable effect on the return of new students for the present session.

Nov. 11th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Treatment of Hysterical Fits.

THE weighty authority of Charcot denies that hysteria, in all its protean forms, is more common in France than elsewhere; and certainly anyone who has had the privilege of following the *clinique* of this master of neuropathology at the Salpêtrière, and listening to the persuasive eloquence with which he maintains this thesis, cannot fail to have even a rooted conviction to the contrary at least severely shaken. Indeed, according to M. Charcot, there are few forms of mental or bodily derangement which hysteria is not capable of simulating to a nicety, and that not only in the female, but also quite as often in the male. That the French as a race are more emotional than either the English or the Germans is a matter of common remark, and to the casual observer this would seem in keeping with the apparently greater number of hysterical outbursts amongst females which are brought under one's observation in this city. Speaking from an experience of six years' residence, a woman in any form of hysterical fit in the streets of London is a rare occurrence, while a similar exhibition in the streets of Paris is—while short of being an everyday phenomenon—at least not infrequent. The treatment of these attacks—which it is safe to assume are proportionately more common in private—is, therefore, a subject of considerable interest to our French

confrères. M. Pitres has recently made some practical remarks in this connexion. Having suppressed the fussy attentions to the patient, and released her from all the physical restraint which may have been exercised over her by anxious friends, he says the next duty of the physician is to search for the antispasmodic zones by commencing in those parts in which they most frequently are found—viz., in the ovarian and epigastric regions. They do not always exist, however; but if they do, energetic pressure made upon them will bring the crisis to an immediate termination. Another efficacious manœuvre is prolonged and gentle compression of the eyeballs. This usually results in the production of hypnotic sleep. The patient may be left in this state until she awakes herself, or she may be awakened brusquely by blowing in her eyes. M. Bernheim of Nancy induces hypnotism by verbal suggestion. He tells his patient that she no longer suffers, that she is about to sleep, that she sleeps, that the crisis is past, and, finally, that she is to wake up. In most cases these imperative injunctions bring the fit to an end. Another therapeutic method, of which, according to Dr. Pitres, the efficacy is incontestable, is the application of the constant current. One electrode is placed on the forehead, the other indifferently on the abdomen or lower limbs, the battery being constructed so that it is possible to reverse the direction of the current; this is done two or three times, and is in general followed by immediate cessation of the convulsions. The current must, to be successful, be fairly strong—30, 40, and even up to 80 elements of Trouvé's battery. He points out, however, that the chief drawback to this treatment is the fact that it rarely happens that a battery may be within reach. Chemical substances, on the contrary, are more easily procured as a rule, and the inhalation of such substances as ether, chloroform, or nitrite of amyl is often successful. Enemata of solutions of chloral hydrate are also suggested, as well as (in some rare cases) hypodermic injections of morphine; but he points out that this latter drug must be used with great caution and circumspection, as hysterical subjects very readily develop the morphia habit. With a view of preventing a recurrence of the attacks, it is well to ascertain exactly what spasmodic zones the patient may have, and, should these zones be painful or easily excited, to apply ice-bags over them or to spray them frequently with ether. Should, again, there be antispasmodic zones, it is recommended to apply not only pressure to them at the time, but to keep this pressure up mechanically in a permanent form. Dr. Pitres would allay the excitability of the nervous centres by liberal doses of chloral, or, if necessary, morphine, but he makes no mention of the bromides. Should the patient be hypnotisable, he advises that it be "suggested" to her to have no further attacks within a given time. Dr. Pitres has had a curious experience with coloured glasses in the treatment of this affection. He says there are certain colours which will actually provoke an attack, while he finds other colours again which either induce hypnotic sleep in a few seconds, or bring about a feeling of calm and comfort in an equally short time; and he cites the case of a young girl, a patient of his, with whom the wearing of spectacles with red glasses had the effect of inhibiting an attack, and much delaying the recurrence of another.

Tubercular Cirrhosis of the Liver.

MM. Hanot and Gilbert have been making a series of experiments on guinea-pigs, which go to show that cirrhosis of the liver owning a tubercular origin is a thing of real existence, notwithstanding doubts to the contrary. The pathological appearances are those of a perilobular and interstitial cirrhosis. The connective tissue contains no tubercles, these being distributed more especially at the periphery of the lobules, and often undergoing fibrous transformation, but being poor in bacilli.

The French Surgical Congress.

The permanent committee of this Congress, which will open in Paris during Easter week, under the presidency of M. Guyon, has published in an order of the day that the following three questions will form the chief item of discussion:—1. Surgical intervention in affections of the nervous centres. 2. Remote results of the ablation of the uterine appendages in non-neoplastic affections of the uterus. 3. The various forms of suppuration from a bacteriological and clinical point of view.

New French Naval Medical School.

The new school for medical officers of the French Navy at Bordeaux was opened last week with considerable ceremony, presided over by the maritime prefect, Admiral Ribell, and supported by the Mayor of Bordeaux and the Dean of the Faculty of Medicine. In the evening a grand banquet was held to commemorate the occasion.

New Faculty of Medicine.

Preparatory to establishing the chief provincial faculties into independent Universities bearing the name of the town in which they are situated, the Government has just raised the school of medicine at Toulouse to the dignity of a Faculty. This will make the seventh faculty of medicine in France.

The late Professor Damaschino.

A subscription for the erection of a bust in memory of this distinguished member of the Paris Faculty has been set on foot. It is proposed to place the bust in one of the principal public halls of the new faculty building.

The French Hospital in London.

A circular was recently issued to the members of the British Chamber of Commerce in Paris inviting subscriptions to assist in clearing off the debt on the French Hospital in London, as a mark of their sympathy with the French nation, and their appreciation of the hospitality and consideration accorded them by the French Government. In response to this appeal subscriptions amounting to about £100 have already been received.

Paris, Nov. 11th.

Obituary.

ALFRED S. JENKINSON, L.R.C.P.ED., L.R.C.S.ED.

IN the death of Mr. Alfred S. Jenkinson, the poor of Clee-with-Weelsby and district have lost one of their greatest friends, and the parish itself a public benefactor. Never within the recollection of the oldest inhabitant in Clee has such profound and universal grief been shown at the death of a townsman as that demonstrated when it became known that Mr. Jenkinson had closed his earthly career. Although not really a public man, and but little known in public life, yet he had, by his unostentatious charity and kindly deeds, earned an enviable name amongst the poorer classes, where his services were in great request. For some years he had suffered from a chronic disease of the nervous system, and from time to time he had had slight apoplectic fits, a severe one terminating fatally late on Friday night. He was engaged in professional duties up to about 11 o'clock at night, and at midnight a friend, hearing a fall in his bedroom, on going there found the occupant in an apoplectic fit, to which he succumbed ten minutes afterwards. He was formerly a student of the Leeds School of Medicine and St. Bartholomew's Hospital, London. He held the licences of the Royal Colleges of Physicians and Surgeons, Edinburgh. He was house surgeon at the Leeds General Infirmary and at the Liverpool Maternity Hospital up to the time of his coming to New Clee. In the district where he laboured such was the esteem in which he was held that a proposal has been made that some monument should be erected to his memory at public expense.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—The proposed scheme for rebuilding this hospital is making rapid progress. The property required for the extension of the present structure has been purchased, and plans prepared for the work. Among the subscribers to the new building fund, Mr. Bernard Wake has given upwards of £6000 for the new out-patient department.

ROYAL METEOROLOGICAL SOCIETY.—The opening meeting of the Session 1890–91 will be held at 25, Great George-street, Westminster, on the 19th inst., at 7 P.M., when the president, Mr. Baldwin Latham, M. Inst. C.E., F.G.S., will deliver an address on "The Relation of Ground Water to Disease."

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council of the College held on Thursday, the 13th inst., the minutes of the quarterly meeting of the Council of the 9th of October were read and confirmed.

The reports of the following Committees were read, approved, adopted, and entered on the minutes:—The Laboratories' Committee of the 17th of October, the Committee of Management of the 20th of the same month and of the 3rd of November, the latter subject to the approval of the Royal College of Physicians. We propose to refer to these reports next week.

A report was read from the Board of Examiners in Dental Surgery, stating that they had consulted the legal adviser of the College, and were informed by him that the Council have not the power under the Charter and By-laws to institute an honorary examination in Dental Surgery.

The President reported the result of the meeting with the deputation of Fellows on the 30th ult.

A letter of the 7th inst. from Mr. H. W. Allingham was read, enclosing a statement of the specific points brought before the Committee of the Council by the deputation of Fellows—namely: 1. With regard to the calling of meeting of Fellows separately from the Members, it was decided to take the opinion of counsel on the question of the power of the Council to do so. 2 The question of voting papers was referred to a Special Committee. 3. To this point the Council reply that it is not in their power to grant the request of the Fellows' Association.

The President reported the result of the meeting of Fellows and Members on the 6th inst., and in reply to the resolution passed at the meeting, the Council refer to the resolution of the Council of November, 1888, in which they considered that with the grant of the Supplemental Charter the matters in contention should be allowed to rest. The offer of Mr. J. T. Morton to extend the number of the Morton Lectures in Cancer and Cancerous Diseases provided the College considered them useful was accepted, and it was decided to continue them on three further occasions.

A letter of the 2nd instant from Dr. Liveing was read, reporting the following proceeding of the Royal College of Physicians on the 30th ult. in reference to matters of interest to the two Colleges, viz:—1. The adoption of the following resolution, viz: "That the subject of the alteration in the curriculum and examination necessary for the extension of the period of study to five years be referred to the Committee of Management for report." 2. The adoption of the reports of the Committee of Management, dated Oct. 6th and 20th, 1890, respectively, and the reports of the Laboratories' Committee, dated Oct. 17th, 1890. 3. The re-election of Dr. Liveing as a member of the Committee of Management.

The President stated that the Bradshaw Lecture would be delivered by Sir T. Spencer Wells, Bart., on Thursday, Dec. 18th next, at 5 o'clock P.M. The subject is not yet announced.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen (in addition to those whose names were given in our last number as having passed the examinations of the Royal College of Physicians), were at an ordinary meeting of the Council on the 13th inst. admitted Members of the College:—

Costine, W. C., L.S.A., Liverpool.
Evans, E., L.S.A., Brighton.
Gray, A. W., L.K.Q.C.P.I., Birmingham.
Higgins, T. F., L.K.Q.C.P.Irel., Manchester.
Mahood, A. E., M.B., R.U.Irel., Birmingham.
Rhodes, H., M.B.Glas., Sheffield.
Wilson, C. W., M.D. McGill, Canada.

The following gentleman, having previously passed the necessary examinations, and having now attained the legal age (twenty-five years), was admitted a Fellow of the College:—

Rennie, Geo. C., M.B.Melb., Kyneton, Victoria, Australia: Member, Feb. 12th, 1889.

The following gentlemen passed the First Professional Examination for the diploma of Fellow at a meeting of the Board of Examiners on the 10th inst.:

Albert John Chalmers and John Evans, of University College, Liverpool; Alfred William Hughes, of Edinburgh University; Thomas Whittaker Iddon, of Owens College, Manchester; Malcolm Langton Hepburn, of St. Bartholomew's Hospital; Charles Plumley Childe, of King's College; Ralph Bodkin Mahon, of Dublin; and James Johnstone, of Otago and Aberdeen Universities. Eight candidates were referred.

Passed on the 11th inst.:—

Frank P. S. Cresswell, of Guy's Hospital; Blackwell Charles, of St. Bartholomew's Hospital; George D. E. Jones, of Middlesex Hospital; Edw. Deansly, of University College; Archibald McKenzie, of Edinburgh University. (Eleven candidates were referred.)

ROYAL UNIVERSITY IN IRELAND.—The following degrees have been conferred by the Pro-Vice Chancellor of the University:—

M.D. Degree.—Maurice Fitzgerald, Henry Jamison, *Henry M'Kisack, James McMordie, Samuel Tate.

M.B. Degree.—Andrew Fullerton (with First Class Honours), James B. Moore (with Second Class Honours), John A. Adams, James M. Brown, Martin Dempsey, George Frost, Thomas Fullerton, James Keegan, Joseph Anderson, Edgar Cane, William Cluff, P. Crowley, John Cruise, Thomas Foley, Robert M. Fraser, James Harrison, James Heaney, Daniel Hill, Thos. Jackson, John Jones, Bertrand Jordan, Richard J. Keane, Robert Lyons, *Michael Mahony, John Mills, James Morrow, John Nevin, Hugh Stranaghan, Edward Tierney, Arthur Tonkin, George Walker, T. B. P. Wilkinson.

M.A.O. Degree.—*George Rountree.

B. Ch. Degree.—John Adams, Joseph Anderson, James Brown, Edgar Du Cane, William Cluff, Patrick Crowley, John Cruise, Martin Dempsey, Maurice Fitzgerald, Thomas Foley, Robt. Fraser, George Frost, Andrew Fullerton, Thomas Fullerton, James Harrison, Jas. Heaney, Daniel Hill, Thos. Jackson, Henry Jamison, John Jones, Bertrand Jordan, Richard Keane, James Keegan, Robert Lyons, James McMordie, *Michael Mahony, John Mills, James Moore, James Morrow, John Nevin, Hugh Stranaghan, Samuel Tate, Edward Tierney, Arthur Tonkin, George Walker, Thos. Wilkinson.

B. A. O. Degree.—J. Adams, J. Anderson, J. Brown, Edgar Du Cane, W. Cluff, P. Crowley, J. Cruise, M. Dempsey, *J. Donaldson, *Jas. Earls, M. Fitzgerald, T. Foley, R. Fraser, G. Frost, A. Fullerton, J. Fullerton, T. Fullerton, T. Harrison, J. Heaney, D. Hill, T. Jackson, Henry Jamison, J. Jones, Bertrand Jordan, R. Keane, J. Keegan, R. Lyons, J. McMordie, *M. Mahony, J. Mills, J. Moore, J. Morrow, J. Nevin, H. Stranaghan, S. Tate, E. Tierney, A. Tonkin, G. Walker, and T. Wilkinson.

Diploma for Proficiency in the Treatment of Mental Diseases.—Wm. Morris, *John Macpherson.

* The degrees of candidates marked * were conferred *in absentia*.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND: CONJOINT EXAMINATIONS.—The undermentioned candidates have completed the Final Examination:—

N. G. Cookman, R. Dalton, G. W. Dawson, H. W. Devlin, Digby M. Ffrench, W. J. Ffrench, P. J. Flanagan, G. J. Hall, A. J. McMunn, M. O'Driscoll, and R. B. Wright.

Passed in one or more subjects:—

R. A. Crawford, T. G. Dillon, G. N. Oakes, Joshua Pim, J. G. Symes, J. A. Thompson.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed the First Examination in the subjects indicated during October:—

Chemistry, Materia Medica, Botany, and Pharmacy.—P. H. Best, B.A. Cantab, Camb. Univ., and University College; A. H. A. Boyle, E. J. Dodson, A. Harding, and S. E. H. Martin, Royal Free Hospital.

Materia Medica, Botany, and Pharmacy.—M. E. Bowlby, Royal Free Hospital.

Pharmacy.—H. Greenwood, London Hospital; J. K. H. Smyth, St. Mary's Hospital.

The following candidates passed the Second Examination in the subjects indicated:—

Anatomy, Physiology, and Histology.—K. Anderson, St. Bartholomew's Hospital; H. C. Cadman, Owens Coll., Victoria University; R. H. Calvert, Yorkshire College, Leeds, and Durham University; H. W. Clarke and H. F. Ealand, St. Mary's Hospital; J. Edwards, London Hospital; A. C. Fenn, St. Bartholomew's Hospital; S. Firth, Yorkshire College, Leeds, and Anderson's College, Glasgow; C. F. Graves, St. Mary's Hospital; F. S. Hogg, Charing-cross Hospital; R. E. T. Ingram, Guy's Hospital; A. N. V. Johnson, Royal Free Hospital; T. L. Johnston, Edinburgh University and University College; F. B. Lewis, London Hospital; B. J. Macaulay, Middlesex Hospital; D. K. McDowell, St. Thomas's Hospital; R. E. Nichols, St. Mary's Hospital; E. B. Pellatt, Royal Free Hospital; J. T. T. Ramsay, Royal College of Surgeons, Edinburgh.

Anatomy.—W. A. King, Charing-cross Hospital.

Physiology and Histology.—E. Grange, Edinburgh University; A. H. Grace, Bristol Medical School; W. Woods, Yorkshire College, Leeds.

Surgery.—P. C. De Wet, St. Thomas's Hospital; J. R. Fuller, St. Mary's Hospital; H. W. John, Guy's Hospital; P. A. Shore, Queen's College, Birmingham; A. M. Van Ingen, L.M.S. Madras University;

W. S. Whitcombe, Glasgow University; E. E. Wilbe and W. Wright, St. Bartholomew's Hospital; W. S. Wright, Bristol Medical School and St. Mary's Hospital.

The following, having previously passed in Medicine, received the diploma of the Society, qualifying for registration:—

H. W. John and J. R. Fuller.

Medicine, Forensic Medicine, and Midwifery.—T. H. Adams, London Hospital; J. M. Bennett, Liverpool and Sheffield School of Medicine; A. B. Blomfield and M. B. Dumaresq, London Hospital; R. A. Irvine, Royal University, Ireland, and Glasgow University; E. W. Livesey, St. Thomas's Hospital; R. H. Mackay, Aberdeen University; H. L. Morgan, Westminster Hospital; C. E. Reinhardt, London Hospital; N. A. A. Trenow, St. George's Hospital; A. M. Van Ingen, L.M.S. Madras University; F. W. Welstead, Guy's Hospital; W. S. Whitcombe, Glasgow University.

Medicine and Midwifery.—G. Wilkinson, Cambridge University and Middlesex Hospital.

Midwifery.—E. A. R. Covey, St. Bartholomew's Hospital.

The following, having previously passed in Surgery, received the diploma of the Society, qualifying for registration:—

A. B. Blomfield, M. B. Dumaresq, F. W. Livesey, H. L. Morgan, C. E. Reinhardt, N. A. A. Trenow, A. M. Van Ingen, W. S. Whitcombe.

GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN.—The Baroness Burdett-Coutts has consented to become "The Lady President" of this hospital.

POLLUTION OF RIVERS.—At a conference held on Monday at Stoke, under the auspices of the Staffordshire County Council, Lord Harrowby presiding, and which was largely attended by representatives from the sanitary authorities of the county, a resolution was carried pledging the local authorities to investigate, in future, their existing systems of sewage disposal, with the view of preventing the pollution of rivers.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The next quarterly meeting of the Medico-Psychological Association will take place on Thursday, Nov. 20th, 1890, at Bethlem Hospital, London, at 4 P.M. Dr. Percy Smith will open a discussion on "The Working of the New Lunacy Act." Dr. Moody will exhibit and describe a lock for single room doors. Dr. Hyslop will show and describe pathological specimens. Members will dine together as usual after the meeting at the Holborn Restaurant at 7 P.M.

DENTAL HOSPITAL OF LONDON.—The annual dinner of the staff and past and present students will be held on Saturday, Nov. 29th, at the Holborn Restaurant, under the Presidency of Dr. Joseph Walker, L.D.S. Gentlemen either now or formerly connected with the hospital or medical school, who may, through inadvertence, not have received special notice, and who desire to be present, should communicate with the dean, at the Dental Hospital, Leicester-square.

ST. JOHN AMBULANCE ASSOCIATION.—At the termination of their duties in connexion with the Lord Mayor's procession, the members of this Association were entertained at dinner at the headquarters, St. John's Gate. The toast of the "Honorary Surgeons of the Brigade" was proposed by the chairman, Mr. Church Brazier, who said that was the first occasion on which they had had an opportunity of doing duty in the City on Lord Mayor's Day. Dr. Gordon Brown responded to the toast. The total number of casualties attended to on Monday was forty-three.

ST. BARTHOLOMEW'S HOSPITAL.—The following prizes and scholarships have been awarded for the year 1889–90, and were presented at a special committee of the Medical School by Sir William Savory, Bart., F.R.S., the senior surgeon:—Jeaffreson Exhibition (£20): G. Calvert. Jeaffreson Exhibition for 1888: F. M. Burnett. Open Scholarships in Science: Junior (£130), E. W. Graves; Senior—1 (£65), S. Gillies; 2 (£65), F. A. Smith and P. Horton Smith (equal). Preliminary Scientific Exhibition (£50): M. J. Pearson. Shuter Scholarship (£50): P. Horton Smith. Treasurer's Prize (instruments): A. C. Gurney. Junior Scholarships in Anatomy and Physiology (£40, £20), A. C. Gurney and F. Fraser; in Chemistry (£10), W. H. Symons. Senior Scholarship (£50): H. Armstead. Foster Prize (instruments): J. S. Sloane. Harvey Prize (instruments): J. S. Sloane. Wix Prize (books): J. C. Baker. Hichins Prize (books): B. H. Leumann. Burrows Prize (£10 10s.): H. W. Bowman. Brackenbury Surgical Scholarship (£30): R. C. Bailey. Brackenbury Medical Scholarship (£30): F. Johnson. Lawrence Scholarship (Gold Medal and £36 16s.): H. A. Powell.

BEQUESTS.—Miss Martha Handcock has left £50 to the Adelaide Hospital, and £20 to the Cripple's Home, Bray.

FOOTBALL CASUALTIES.—On Saturday, during a match at Ruddington, Notts, the ball struck the face of a Mansfield player, and seriously injured one of his eyes. Whilst playing in a match at Southport, last week, Walter Sugg sustained a fracture of the collar-bone.

METROPOLITAN HOSPITAL SATURDAY FUND.—It is officially announced that the present year's collection for this fund will probably amount to about £20,000, an excess on any prior collection of £6000. Awards are being prepared for the distribution of £16,000.

A STEP IN THE RIGHT DIRECTION.—Within the next few days the St. Gabriel's Hospital for Infants will become incorporated with the Victoria Hospital for Sick Children at Chelsea. By this action the scope of both institutions will be enlarged and benefited, as the expenses for the maintenance of the twelve cots at St. Gabriel's Hospital will be reduced from £1000 to £600 per annum, by which amount the funds of the Victoria will be augmented.

OLD KING'S CLUB.—This club has been established to promote mutual and friendly intercourse among old Kingsmen, and generally to further the interests of King's College, Hospital, and School. The club consists of dining, reading, billiard, card, and bed-rooms, and usual offices, and all the advantages usually found in clubs. It is hoped that all old Kingsmen will join. Prospectuses can be had on application to the secretary, Old King's Club, 39, King-street, Covent-garden.

COTTAGE HOSPITALS.—The Northallerton Hospital continues to grow in usefulness. Fifty-nine patients were admitted during the past year. The daily average of in-patients had risen from 5 to 5·61, the number of days from 31·5 to 34·79, and 16 accidents received medical treatment.—The present accommodation of the Mexborough Hospital being inadequate for its requirements, plans for an enlargement have been adopted at an outlay of about £300. Mr. A. Montagu has promised to give the necessary site and a donation of £50.

THE SANITARY CONDITION OF ST. LEONARD'S, SHOREDITCH.—An inquiry, ordered by the Home Secretary, is now being made into the immediate sanitary requirements of the parish of St. Leonard's, Shoreditch. The Commissioners appointed are Mr. Cubitt Nicholls and Dr. Edward Seaton. The Mansion House Council, at whose instance the inquiry has been granted, will be represented by Mr. Corrie Grant and Mr. Joseph Mosenthal. The London County Council is represented by its medical officer, Mr. Shirley F. Murphy.

ROYAL ACADEMY OF MEDICINE IN IRELAND.—The following have been elected office-bearers for the ensuing year:—*Medical Section*—President: J. Magee Finny. Council: W. Beatty, J. H. Benson, Michael A. Boyd, A. W. Foot, R. A. Hayes, J. W. Moore, A. N. Montgomery, John Moloney, Joseph M. Redmond, Walker Geo. Smith. *Pathological Section*—President: E. H. Bennett. Council: A. W. Baker, C. B. Ball, A. H. Benson, H. Bewley, C. Nixon, R. G. Patteson, J. M. Purser, E. J. MacWeeney, J. A. Scott, J. B. Story. *Surgical Section*—President: H. Gray Croly. Council: A. H. Corley, Kendal Franks, Edward Hamilton, Patrick Hayes, Austin Meldon, T. Myles, E. Stamer O'Grady, Sir William Stokes, Thornley Stoker, R. L. Swan. *Obstetrical Section*—President: S. Mason. Council: W. S. Bagot, J. J. Cranny, R. H. Fleming, A. H. Horne, F. W. Kidd, J. L. Lane, T. M. Madden, R. O'Callaghan, A. J. Smith, W. J. Smyly. *Section of Anatomy and Physiology*—President: J. M. Purser. Council: J. Barton, A. Bermingham, H. Brooks, H. Broomfield, D. Cunningham, F. T. Heuston. *Section in State Medicine*—President: A. W. Foot. Council: Sir C. Cameron, E. Cosgrave, N. Falkiner, T. W. Grimshaw, J. W. Moore, J. M. Redmond. General Secretary and Treasurer: William Thomson. Secretary for Foreign Correspondence: J. W. Moore.

WEST HERTS INFIRMARY. — The sanitary improvements just effected being completed, during which some of the wards were temporarily closed, the institution was re-opened last week.

CATHOLIC UNIVERSITY MEDICAL SCHOOL.—The following Prizes and Exhibitions have been awarded for the Session 1889-90:—Final Exhibition (£20): George H. Frost. Third Year's Exhibition (£15): Alexander J. Blaney. Second Year's Exhibition (£10): John Shine. First Year's Exhibition (£14 14s. each): Louis Crinnion, Andrew J. Quirke. Osteology Prizes: First, John O'Brien; second, Francis Whittaker.

AN INTERESTING PRESENTATION.—A fine portrait of the First Dean of the Faculty of the Woman's Medical College in Summach-street, the late Dr. Barrett, was recently placed on the walls of the board-room of the College. Those who knew Dr. Barrett in the flesh have a mournful pleasure in seeing such a memento of him hung in a room so closely associated with his labours in the cause of the medical education of women.

OPEN SPACES.—It was announced at the last monthly meeting of the Metropolitan Public Gardens Association that the Earl of Meath's appeal for £5000, for adapting certain grounds, had not met with much success. Through the persistent efforts of the Association the London School Board had opened to children on Saturday the playgrounds surrounding 163 of its schools, including twelve maintained as an experiment by the Association, but 240 Board School grounds still remained closed on Saturday.

HOSPITAL ENLARGEMENT.—At a recent meeting of the governors of and subscribers to the Chesterfield and North Derbyshire Hospital the report of the board of management upon the proposed enlargement of the building was considered. The report recommended the provision of accommodation for 22 additional beds, the cost being estimated at £5000, which it was recommended should come out of the invested funds. The estimated deficiency from loss of interest and increased expenditure was £60 a year. The report was adopted.

MEDICAL MAYORS.—The following members of the medical profession were elected to serve as mayors for the ensuing year:—Bangor: Alderman J. Richards, L.K.Q.C.P. Irel., M.R.C.S. Dunstable: Mr. Augustus Morcom, L.R.C.S. Edin. Sutton Coldfield: Alderman A. H. Evans, M.R.C.S. Wrexham: Mr. H. V. Palin, M.B., L.R.C.P., L.R.C.S. Edin. Chichester: Mr. F. V. Paxton, M.B., M.R.C.P. Lond. Clitheroe: Mr. J. J. Smithies, L.F.P.S. Glas., L.R.C.P. Edin. Congleton: Alderman Hugh Moss, M.D. St. And., M.R.C.S.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on November 11th, 1890.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	291	45	..	83	7	426	442
North-Western Hospital	336	38	..	18	1	393	443
Western ,,	179*	16	..	15	3	213	262
South-Western ,,	267	..	..	..	..	267	340
South-Eastern ,,	282*	29	1	54	2	368	463
Northern ,,	447	32	..	16	..	495	480
Gore Farm ,,	251	..	..	..	..	251	300
Totals	2053	160	1	186	13	2413	2729

* 1 infant and mother.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALEXANDER, PETER, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Whitley District of the Tynemouth Union.

BALFOUR, JAMES C., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the West District and the Workhouse of the Belford Union.

BARRETT, W. H., M.B., C.M. Edin., has been appointed Pathologist to the Royal Infirmary, Edinburgh, vice Bruce, resigned.

BOOTH, ALBERT E., M.B., C.M. Edin., has been appointed Head Surgeon of the Liverpool East Dispensary, vice Rodley, resigned.

CLAYTON, E. G., A.I.C., F.I.C., F.C.S., has been appointed Analyst for the Parish of Fulham, vice Piesse.

COSGRAVE, E. M., M.D. Dub., F.K.Q.C.P., L.R.C.S. Irel., has been appointed Examiner in General Education to the Pharmaceutical Society of Ireland.

CRAIG, FREDK. A., M.B., B.Ch. R.U. Irel., has been appointed Resident Clinical Assistant to the Nottingham Borough Asylum.

DICKSON, T. HUGH, M.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Lincoln County Hospital.

EDWARDS, H. N., L.R.C.P. Lond., M.R.C.S., has been appointed House Physician to the East London Hospital, Shadwell, vice Cooper.

FARRAR, CHAS., M.D. Heidelb., L.F.P. & S., L.M. Glasg., L.S.A. Lond., has been appointed Medical Officer of Health for the Chatteris (Cambs.) Urban District; also Medical Officer and Public Vaccinator for the Fourth District of the North Welchford Union (reappointed).

FRITH, J. LACY, M.D., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to the Bradford Infirmary, vice Kerr.

GAIRDNER, JAMES, M.D. Edin., L.R.C.S., has been appointed District Medical Officer of Health for Crieff, &c.

GRAVES, W. R., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Pathologist to St. Mark's Ophthalmic and Aural Hospital, Dublin.

HART, E. J., M.R.C.S., has been appointed Honorary Consulting Surgeon to the Brighton, Hove, and Preston Dispensary.

HILDYARD, R. L., M.R.C.S., has been appointed Medical Officer for the Sixth District of the Shepton Mallett Union.

JACKSON, J. A., M.B., M.S. Glasg., has been appointed Honorary Medical Officer to the Hexham Dispensary.

KENDAL, C. R., M.R.C.S., has been appointed Honorary Medical Officer to the Hexham Dispensary.

MACNAUGHTON, W. A., M.D., M.B. Edin., has been appointed Medical Officer for the County of Kincardine.

MANBY, E. P., M.B., B.S. Cantab., M.R.C.S., has been appointed Head Surgeon of the Liverpool South Dispensary, vice Dalzell, resigned.

MATTHEWS, HARRY E. H., M.R.C.S., L.R.C.P. Edin., has been appointed Medical Officer for the Eighth District of the Chorlton Union, vice W. C. Matthews, resigned.

MILLS, W. T., L.K.Q.C.P., L.R.C.S. Irel., has been appointed House Surgeon to the Jervis-street Hospital, Dublin.

PARRY, EDWD. J., M.D. Irel., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Garw District of the Bridgend and Cowbridge Union.

PARRY, W. HARROP, M.B., C.M. Glasg., has been appointed Resident House Surgeon to the Flintshire Dispensary.

REID, GEORGE, M.D., M.B., D.P.H. Aberd., has been appointed Medical Officer of Health to the Staffordshire County Council.

SOUTHWELL, CHAS. H., Pharmaceutical Chemist (by examination), of Boston, has been appointed Public Analyst for the Holland Division of Lincolnshire.

STEWART, D., L.R.C.P., L.R.C.S. Edin., has been appointed Honorary Medical Officer to the Hexham Dispensary.

TAYLOR, JAMES, M.D. Edin., M.R.C.P. Lond., has been appointed Registrar and Pathologist to the National Hospital for the Paralysed and Epileptic, Queen-square, vice W. S. Colman.

WALLACE, Q. MACADAM, M.B. Edin., has been appointed Deputy Medical Officer for Birkenhead.

WHITAKER, HENRY, M.D. Irel., M.R.C.S., has been appointed Medical Superintendent of Health and Chief Sanitary Officer for the Municipality of Belfast.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BOLTON INFIRMARY AND DISPENSARY.—Senior House Surgeon. Salary £120 per annum, increasing £10 per annum to £150, with furnished apartments, board, and attendance.

CENTRAL LONDON SICK ASYLUM DISTRICT.—Assistant Medical Officer and Dispenser for the Asylum in Cleveland-street. Salary £100 per annum, with board and residence.

CITY OF LONDON LUNATIC ASYLUM, Stone, near Dartford, Kent.—Clinical Assistant. No salary, but board, lodging, washing, and attendance provided.

COUNTY BOROUGH OF SHEFFIELD.—Resident Medical Officer for the Winter-street Hospital for the Treatment of Cases of Infectious Diseases. Salary £200 per annum, with board, lodging, and attendance. (Apply to the Town Clerk, Town Clerk's Office, Sheffield.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon. Salary to commence at £85 per annum, with board, residence, and washing in the house.

DEVON AND EXETER HOSPITAL, Exeter.—House Surgeon.

DORSET COUNTY ASYLUM.—Assistant Medical Officer. Salary £135 per annum, with board &c. (Apply to the Medical Superintendent.)

EDINBURGH DEAF AND DUMB INSTITUTION.—Oculist and Aurist. (Apply to the Secretary, 14, Young-street, Edinburgh.)

GENERAL HOSPITAL FOR SICK CHILDREN, Manchester.—Junior Resident Medical Officer. Salary £80 per annum, with board and lodging. The appointment is for one year.

GENERAL INFIRMARY, Stafford.—Assistant House Surgeon. No salary, but residence, board, and washing provided. (Apply to House Surgeon.)

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Resident Medical Officer as House Surgeon for one year. Salary £50 per annum, with board and residence in the Hospital.

LINCOLN ODDFELLOWS' MEDICAL INSTITUTE.—Second Assistant Medical Officer. Salary £104 a year, out-door. Dispenser kept. (Apply to the Resident Medical Officer, 5, Unity-square, Lincoln.)

LIVERPOOL DISPENSARIES.—Two Assistant Surgeons. Salary £80, with apartments, board, and attendance in each case. (Apply to Mr. Greene, Leith Offices, 34, Moorfields, Liverpool.)

LONDON HOSPITAL, Whitechapel-road, E.—Surgical Registrarship. Salary £100 a year.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer for not less than two years. Salary £150 per annum, with board and residence.

MANCHESTER ROYAL INFIRMARY (MONSALL FEVER HOSPITAL).—Assistant Medical Officer at Monsall Fever Hospital for twelve months. Salary £100 per annum, with board and residence.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—A Trustee of Investments.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant Physician.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Dentist.

ROYAL UNIVERSITY OF IRELAND, Dublin.—Examiners.

SECRETARY, LONDON SOCIETY FOR PROMOTING CHRISTIANITY AMONGST THE JEWS, 16, Lincoln's-inn-fields, London, W.C.—Medical Missionary to the Jews at Safed.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester-square London.—Honorary Assistant Physician.

UNIVERSITY COLLEGE, Gower-street, London, W.C.—Curatorship of the Anatomical Museum. Salary £150 per annum.

Births, Marriages, and Deaths.

BIRTHS.

ACLAND.—On Nov. 7th, at Brook-street, W., Caroline, wife of Theodore Dyke Acland, M.D., of a son.

CRANE.—On Nov. 9th, at Sandgate-road, Folkestone, the wife of Andrew Crane, L.D.S., of a son.

HAZLETT.—On Oct. 15th, at Madras, the wife of Surgeon-Major H. J. Hazlett, of a daughter.

MOIR.—On Oct. 19th, at Right Flank Lines, Poona, the wife of Surgeon J. Drew Moir, Army Medical Staff, of a daughter.

THOMAS.—On Nov. 2nd, at Moulmein, Burmah, the wife of Dr. G Tucker Thomas, Surgeon-Major, of a son.

MARRIAGES.

CALROW—HANDLEY.—On Nov. 5th, at Bury Parish Church, by the Rev. John Bealey, Vicar of St. Hilda's, Middlesboro', cousin of the bride, and assisted by the Rev. F. E. Hopwood, Rector of Bury, Thomas Calrow, M.R.C.S. Eng., Bolton-street, Bury, Lancashire, to Florence Amy, third daughter of Joseph Handley, Esq., Spring Wells, Bury, Lancashire. No cards.

DARTER—MORRIS.—On Nov. 7th, at Christ Church, Whitley, Reading, by the Rev. Edward A. Bury, assisted by the Rev. G. K. Turner, Vicar of the Parish, George B. Silver Darter, M.B., second son of W. B. Silver Darter, Cape Town, South Africa, to Lilian Kate, eldest daughter of Edward Morris, Southern Hill, Reading.

FALL—WAYMOUTH.—On Nov. 5th, at St. Matthias', Torquay, Edwin Armstrong Fall, M.R.C.S., son of the late Richard Whiteman Fall, to Eleanore Braithwaite, younger daughter of Charles Waymouth, late Captain 17th Lancers.

JOHNSTON—FURBER.—On Nov. 4th, at Holy Trinity Church, Maidstone, Robt. H. W. Johnston, L.R.C.P. & L.R.C.S. Edin., eldest son of Major Johnston, Royal Horse Artillery, Woolwich, to Edith, third daughter of G. H. Furber, J.P., Surgeon, of Maidstone.

POPERT—SHERBROOKE.—On Nov. 10th, at St. James', Birkdale, by the Rev. R. Stephenson; M.A., A. J. Popert, M.R.C.S., to Eva Caroline, second daughter of Commander William Sherbrooke, R.N., of Oxton Hall, Notts.

STOCKTON—STOBO.—On Nov. 8th, at St. Paul's Church, Newcastle-on-Tyne, by the Vicar, the Rev. L. Sanders, Hubert S. Stockton, M.R.C.S. &c., youngest son of S. R. Stockton, Esq., of Wray-crescent, London, N., to Marion Grace, third daughter of Wm. Steel Stobo, Esq., of Belgrave-terrace, Newcastle-on-Tyne.

DEATHS.

ARCHER.—On Nov. 10th, at 18, St. Quintin Avenue, North Kensington, William Gammon Archer, M.B. Cantab., F.R.C.S., son of the late John Archer, of Birmingham, aged 42.

HORNE.—On Oct. 28th, at Nowgong, Central India, Henry Frederic Horne, Army Medical Staff, second son of the late Col. T. D. Horne, Royal Artillery, aged 32.

JENKINSON.—On Oct. 11th, suddenly, at 58, Albert-terrace, Grimsby, Alfred Samuel Jenkinson, Surgeon, third son of the late Samuel Jenkinson, Ranskill.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, November 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

HOSPITAL FOR DISEASES OF THE THROAT (Golden-square, W.).—Dr. J. W. Bond: Nasal Polypus. (Post-Graduate Lecture.)

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. W. Lang: External Diseases of the Eye. New Infirmary, Paddington: 4 P.M., Dr. Cheadle: Clinical Lecture on Medical Cases. 5 P.M., Dr. Savill: Pathological Demonstration.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Sir William Roberts: On the Deposition of Urates in the Tissues considered as a Separate Pathological Incident, with a Suggestion for a Distinctive Name.—Dr. George H. Savage: On some Relationships between Diabetes and Insanity.

Tuesday, November 18.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Diseases of Skin, Blackfriars: 4.30 P.M., Dr. Payne: Psoriasis.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. A. Wynter Blyth: Diseases of Animals in relation to Meat-supply; Characteristics of Vegetables, Fish, &c. unfit for Food.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Hurry Fenwick: Hydatid Sac in Pelvis obstructing both Ureters.—Mr. John R. Lunn: Hydatid.—Dr. Wethered: Psilosis.—Mr. A. Bowlby: Occlusion of the Subclavian Artery from Contusion.—Dr. J. A. Ormerod: Aneurysm of the Heart.—Dr. G. Gulliver: Atrophy of Heart.—Dr. Norman Moore: Ulceration and Perforation of Gall-bladder without Calculi.—Dr. Montague Murray: Ulcer under Vocal Cord followed by General Emphysema.—Dr. A. F. Voelcker: Caseous Gland opening into the Œsophagus. Card Specimen by Dr. G. Gulliver.

Wednesday, November 19.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

HOSPITAL FOR DISEASES OF THE THROAT (Golden-square, W.).—Dr. Norris Wolfenden: Diseases of Tonsils. (Post-Graduate Lecture.)

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. Percy Kidd: Pulmonary Phthisis. Royal London Ophthalmic Hospital: 8 P.M., Mr. Silcock: Ophthalmoscopic Cases.

ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. A. T. Watson: The Tube-building Habits of *Terebella littoralis*.—Surgeon V. Gunson Thorpe: Note on a new Marine Annelid. Adjourned Special General Meeting.

Thursday, November 20.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

LONDON POST-GRADUATE COURSE.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Ormerod: Demonstration of Selected Cases. Hospital for Sick Children, Gt. Ormond-st.: 4 P.M., Mr. J. H. Morgan: The Modern Aspects of Operative Surgery in Childhood (No. 1).

CHARING-CROSS HOSPITAL.—4 P.M. Mr. Wainewright: External Affections of the Eye. (Post-Graduate Course.)

Friday, November 21.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. Percy Kidd: The Examination of the Sputum fo Tubercle Bacilli, with Practical Demonstration.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. A. Wynter Blyth: Sanitary Law.

Saturday, November 22.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department 9.15 A.M

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 13th, 1890.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Nov. 7	29·12	W.	49	45	64	51	39	·27	Foggy
,, 8	29·65	S.W.	41	39	75	54	39	·31	Cloudy
,, 9	29·43	W.	44	41	65	51	40	·08	Bright
,, 10	29·70	W.	39	38	68	48	38	..	Foggy
,, 11	29·45	S.E.	43	42	61	52	38	·02	Foggy
,, 12	29·85	S.W.	40	39	67	54	38	·01	Raining
,, 13	29·79	S.	51	50	57	52	40	·18	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

We cannot undertake to return MSS. not used.

THE TRIALS OF TRACHEOTOMY.

M.D., B.S. Lond. favours us with the following amusing incident, which occurred some few years ago, when the writer was in residence at a metropolitan hospital:—

"A man who had fallen down in a public-house near by was brought into the hospital one Saturday evening and deposited on the floor of the surgery by his escort, prominent amongst whom, as 'guide, philosopher, and friend,' was the cabby. It had evidently been a 'wet night' with most of them, and as they stood round a fragrant odour of spirits diffused through the air. Examination showed the man to be almost moribund. He was blue in the face, with veins knotted and turgid, breathing stertorously. As no assistance in the way of information was obtainable from his bibulous companions, after a hurried consultation tracheotomy was decided upon at once, in view of the possibility of a foreign body in the larynx. The operation, hastily done on the floor, where the man lay, was a somewhat gory affair, owing to the venous congestion about the trachea. However, it proved ineffective, and the man gave one or two gasps and died. Then, freely interspersing his remarks with hiccoughs, cabby relieved his mind thus: 'Pretty fine 'awspital this to bring a man to; 'ere's a poor cove wot's dropped down ill in a public, and when me and these other gen'l'men brings 'im along 'ere to be doctored, —— my eyes! if they don't go and lay 'im out on the floor and cut his —— throat.' It is needless to say cabby was persuaded to resume his avocation without delay. All previous attempts to convince him that he had not been the witness of a horrible murder were not, judging from the tenour of his parting observations, equally successful."

Dr. L——.—There can be little doubt that the action of the gentleman alluded to in our correspondent's letter was contrary to professional courtesy. Probably Dr. P—— will think so, too, on reflection.

Mr. N. E. Yorke-Davies.—We think the matter has already been sufficiently discussed.

Dr. J. C. Cullingworth.—The paper will be published in an early number.

Bristol Boy should press his claim, if necessary, *legally*.

ENTRANCE SCIENCE SCHOLARSHIPS AT ST. THOMAS'S HOSPITAL.

To the Editors of THE LANCET.

SIRS,—I observe in THE LANCET of Nov. 1st that Mr. Philip Dear complains that he has been ruled ineligible for the Entrance Science Scholarship at St. Thomas's Hospital on account of having obtained the Exhibition to that hospital from Merchant Taylor's School. If my memory is correct, in 1880 Mr. B. Relton, the holder of the Merchant Taylor's Exhibition, obtained the Second Entrance Science Scholarship at St. Thomas's. If I am correct, I should suppose that fact would decide the matter in his (Mr. Dear's) favour at once.

I am, Sirs, yours obediently,

R. HELLIS,
Merchant Taylor's Exhibitioner, 1876.

Lenton, Nottingham, Oct. 31st, 1890.

THE TREATMENT OF DIABETIC COMA.

AN obvious clerical error occurred in the annotation on the above subject in our last week's issue. It was the substitution of the words "castor oil" for 'castoreum" as one of the stimulants favoured by Dr. Schmitz, who draws attention to the fact that it is the "castoreum *sibericum*," and not the "castoreum *canadense*." Its action is similar to that of musk.

W. H.—We think the principal has both legal and moral right to ask A to appear. Certainly, he could compel him to do so in the same way as any other witness.

Mr. C. Harvey will find much information on the subject in our Students' Number, published on Sept. 6th last.

A Regular Reader should send us his name and address, not necessarily for publication.

The Great Tower-street Tea Co.—The matter is receiving our attention.

THE TITLE OF "PHYSICIAN" USED BY GRADUATES.

To the Editors of THE LANCET.

SIRS,—Your correspondent, "X. Y. Z.," asks for the distinction between the terms "doctor" and "physician." It cannot be disputed, I think, that "Dr." (in its medical sense) is strictly and legitimately applicable only to those who hold the degree of M.D. of some university. And it seems to me equally clear and indisputable that the term "physician" means "one who is legally qualified to practise medicine" just as a "surgeon" is "one who is legally qualified to practise surgery." And it matters not what the qualification may be, whether the degree of M.D., or the F., M., or L.R.C.P., or even the humble L.S.A., if this degree or diploma entitles him to practise medicine, he is, *ipso facto*, a physician. No other *definition* seems to me possible. If it be attempted to define it as "one who holds the degree of M.D. from a University or a diploma from a College of Physicians," I reply that that is not a *definition*, but a mere *enumeration* of the classes to which he would apply the term, as if one defined "living things" as "plants and animals." Though myself holding only the M.R.C.S. and L.S.A., I claim to be a "PHYSICIAN."

Stroud-green-road, N., Nov. 2nd, 1890.

To the Editors of THE LANCET.

SIRS,—"X. Y. Z." solicited a reply in the last number of THE LANCET to the often-mooted question from its readers as to whether they think a graduate of any university has any legal right to designate himself by the title of "physician." In my humble opinion most assuredly not—i.e., if unconnected with a Royal College of Physicians. Neither has the latter, I contend, wishing strictly to keep in the path of rectitude, any legal right whatever to assume the title of "doctor," unless a graduate. Irrespective of class, universities alone have the power to confer degrees and give the use of the title, although perhaps a rose would smell equally as sweet under either.—I am, Sirs, yours faithfully,

Nov. 4th, 1890. F.R.C.P. Eng.

Mr. W. R. Haigh.—We have no recollection of the article referred to, nor are we aware of the existence of any trustworthy statistics bearing on the point mentioned.

Mr. S. Lee.—While no permanent relief follows chloroform in these cases, there is often a temporary alleviation of symptoms—cough lessened, &c.

TREATMENT OF STAMMERING.

To the Editors of THE LANCET.

SIRS,—I have under my care a boy, aged seventeen, who has always stuttered, and badly, but worse at times than at others. His general health is now fairly good, he having gradually got over the effects of what probably was a birth-palsy, and which threatened at one time to render him, if he lived, a cripple. A slight weakness of the right arm and leg still remains. Mental capacity fair, but requires developing. I should be much obliged if any of your readers would kindly give me information as to the treatment of stuttering. I should like to know (1) details of any systems, (2) the best treatises, and (3) the names of any reliable instructors. I am, Sirs, yours obediently,

Nov., 1890. K.

INSUSCEPTIBILITY TO VACCINATION.

To the Editors of THE LANCET.

SIRS,—In reply to "Public Vaccinator," allow me to say that in about 5000 cases in eleven years I had not one insusceptible. As to private vaccination the Local Government Board inspector told me I must vaccinate in four places, or I should get no grant. The sixpenny man over the way vaccinates in one vesicle. Now, either my four were unnecessary, or his one was totally inadequate. Yet he obtained a certificate of successful vaccination. I am, Sirs, yours truly,

November, 1890. HARD-UP.

"CANCER MORTALITY AMONGST JEWS."

To the Editors of THE LANCET.

SIRS,—Some years ago I removed a scirrhous tumour of the breast from a Jewess, who eventually died three years afterwards with recurrence in the left lung. About the same time I saw her son-in-law, who had epithelioma linguæ. This was removed by another surgeon, and the patient, I was told, died of recurrence of the disease within a year.

I am, Sirs, yours faithfully,

Green-street, Park-lane, W., Nov. 10th, 1890. G. R. TURNER.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. S. West, London; Dr. Priestley, Grantham; Mr. Whitehouse; Mr. Burridge, London; Dr. Hare, Brisbane; Mr. Mayne, Edinburgh; Mr. Rodger; Dr. C. M. Tidy, London; Dr. Macewen, Glasgow; Messrs. Ferris and Co., Bristol; Mr. Eccles, London; Dr. Page, Redditch; Dr. Glover Lyon, London; Mr. Kimpster, Newcastle-on-Tyne; Messrs. Lee and Martin, Birmingham; Mr. J. W. Walker, Wakefield; Dr. Whiteside Hime, Bradford; Mr. Stockton, Tollington-park; Messrs. W. and C. Davis, Brighton; Mr. J. Poland; Dr. Seaton, London; Dr. Harry Campbell, London; Dr. R. Schmidt, Bonn; Mr. G. King; Mr. Watson Cheyne, London; Dr. Phillips, Yorkshire; Mr. Cooke, Altrincham; Dr. Whitney, Tokyo; Mr. A. H. Mason, London; Dr. J. H. Aveling, London; Dr. Horrocks, London; Mr. J. Taylor, London; Mr. Pugin Thornton, Canterbury; Mr. G. Rose-Innes, jun., London; Dr. Fletcher Beach, Dartford; Surgeon-Major Gabbett, Secunderabad; Mr. D'Arcy Power, London; Dr. A. R. Aldridge, Jullundur; Messrs. Hertz and Collingwood, London; Mr. F. A. Heslop, Blackpool; Messrs. Isaac and Co., London; Dr. Barr, Liverpool; Dr. Linde, Ross; Mr. H. T. Wood, London; Mr. Husband, Sutton; Mr. T. S. Allan; Mr. A. P. Millar, Nelson; Dr. W. Johnstone, London; Mr. W. Gosse, Sittingbourne; Mr. S. Plimsoll, London; Dr. Collins, London; Mr. Lawson Tait, London; Mr. E. W. White, Birmingham; Messrs. Simmonds and Tullidge, London; Mr. H. Lund, Manchester: Messrs. Griffin and Co., London; Mr. T. Godfrey, Mansfield; Messrs. Laughton and Co., London; Dr. H. Snow; Captain Blount, London; Mr. Morton Smale, London; Dr. Neale, London; Mr. C. Harvey; Messrs. Becker and Co., London; Dr. Peregrine, London; Messrs. Smith, Elder, and Co., London; Mr. H. W. Allingham, London; Dr. J. M. Bleyer, New York; Dr. Blake, Dublin; Mr. Addison, Glasgow; Messrs. Hill and Co.. London; Dr. G. Reid, Stafford; Messrs. Mulinder Bros. and Co., London; Mr. Martin, Gorton; Dr. Rentoul; Messrs. Schacht and Co., London; Mr. Lamb, London; Dr. G. Harley; Messrs. G. Street and Co., London; Mr. J. H. Walters, Reading; Mr. J. M. Robinson, London; Mr. Briscoe, Bolton; Dr. Thomas, Bournemouth; Dr. R. D. Batten, London; Dr. Emmerson, Biggleswade; Dr. R. J. Anderson, Galway; Mr. E. L. Walford, London; Mr. V. Jackson, Wolverhampton; Mr. A. Lane, London; Mr. Mackinnon, Aleppo; Mr. Silverlock, London; Dr. Macdonald, Dorset; Mr. Pim, Dublin; Mrs. Gregory, Isleworth; Dr. Steele, Florence; Mr. Ward, London; Mr. McMadden, Menston; Dr. Miller, Illinois; Mr. Blount, Paris; Mr. Yorke-Davies, London; Mr. Burnet, London; Mr. Brown, Sheffield; Mr. J. Spring, Grimsby; Mr. S. L. Hutchinson, London; Dr. Graves, Providence, R.I.; Mr. Astley, Chippenham; Mr. Jones, Denbigh; Messrs. Eason and Son, Dublin; Mr. H. R. Davies, London; Messrs. Simpson and Co., Leeds; Mr. A. J. Williams, Coleford; Messrs. Hopkinson and Co., London; Mr. Miller, Brightlingsea; Messrs. Mackey, Mackey, and Co., London; Mr. Townsend, Exeter; Messrs. Duncan, Lockhart, and Co., Edinburgh; Mr. Shipton, Stafford; Mr. Kerthaw; Messrs. Grace and Co., Bristol; Mr. Saunders, Manchester; Mr. Johnson, Tynemouth; Dr. Haviland, Douglas; Mr. Watson, Glasgow; Mr. Lamb; Secretary, General Infirmary, Worcester; Maltine Manufacturing Co., Bloomsbury; B., London; Otho, London; Town Clerk, Borough of Sheffield; N. B., Manchester; Bristol Boy; Formula; A Regular Reader; Dosimetry, London; Medicus, London; Medical Officer of Health, Devizes; Beta, London; M. W. F., Edinburgh; West-end Hospital, London; J. M. D., Glamorgan; Delta, London; A. B., Birkenhead; Royal Infirmary, Manchester; P. P., Bristol; Alpha.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Tully, Hastings; Mr. Mansell Moullin, London; Mr. Morgan, Stoke-upon-Trent; Dr. Davies, Maesteg; Mr. Williams, Cardigan; Mr. Freeman, Soho-square; Dr. Bower, Bedford; Mrs. Levick, Paris; Dr. Palmer, Chalford; Miss Pink, Dawlish; Mr. Ruck, Devizes; Messrs. Reade Bros., Wolverhampton; Mr. Burcombe, Lincoln; Messrs. Burroughs and Wellcome, London; Dr. Teryson, Brussels; Messrs. Wyleys and Co., Coventry; Dr. Wallis, Ash-next-Sandwich; Messrs. Oliver and Boyd, Edinburgh; Rev. Mr. Reuth, Worcester; Messrs. Squire and Son, London; Mr. Ernst, London; Mr. Elliott, Devon; Messrs. J. and H. Grace, Bristol; Mr. Tyte, Minchinhampton; Messrs. Frost and Ruf, St. Louis; Mr. Westbrook; Mr. Hay, Hull; Mr. Meakin, Ebbw Vale; Dr. Stephen, London; Mr. Roberts, Conway; Mr. Felvus, East Molesey; Mrs. Smith, Blackpool; Mrs. Theobald; Messrs. Beal and Son, Brighton; Dr. Macdougall, Gourock; Mr. Thursfield, Shrewsbury; Mr. Williams, Buckley; Mr. Hawkins, London; Mr. Simmonds, Newbury; Dr. Ross, Huddersfield; Mr. Brown, Tredegar; Mr. Baron, Lincolnshire; Mr. Pennyfather, Leamington; Mr. Adams, Birmingham; Mr. Hinde, London; Dr. Stainforth, Redcar; Mr. Jenkinson, Grimsby; Mr. Davis, London; Dr. Gwynne, Sheffield; Messrs. Ross and Co., Belfast; Mr. Jacoby, Stoke-on-Trent; Dr. Elliott, Moreton Hampstead; Mr. Hood, Ackworth; Mr. Carter, London; Mr. John Heywood, Manchester; Dr. Scriven, Derby; Dr. Hilliard; M. Otto Maas, Vienna; Mr. Alexander, Kensington; Mr. Conaghy, Birkenhead; Mrs. Spanton, Pimlico; Mr. Deacon, Manchester; J. P. S.; G. S. W., Brondesbury; B. S., Colchester; Secretary, Worcester City and County Asylum; R. J., Dunbar; Secretary, Royal Hants County Hospital, Winchester; L. M., London; Secretary, Hospital for Sick Children, Bristol; Medicus, London; Veritas, London; Grove House Private Asylum, Hendon; R. H. R., London; Secretary, Barnwood Hospital; Quinine, London; B., London; Secretary, St. Andrew's Hospital, Northampton; A., London; Bromide; Secretary, Seaman's Hospital Greenwich; Philip, Hanley; F. S., London; Morris Tube Co., London; Y. E., London; Dr., Liverpool; Secretary, Flintshire Dispensary; N. B., London; Tenax, London; Jessop Hospital for Women, Sheffield; A. N., London; M.D., St. Leonards; Ashwood House, Staffs; A., London; A. R., London; R. S., London; Harrow Local Board; M.R.C.S., London; Yorkshire, London; Edinburgh School of Medicine; Matron, Dorchester; M.D., Brighton; Hackney Furnishing Co., London; Otho, London; Clinical Hospital for Women and Children, Manchester; Dunelm, London; Royal Orthopædic and Spinal Hospital, Birmingham; Whittle, Liverpool; Northumberland County Asylum; A.; Matron, Leeds; F., Stoke-on-Trent; Clayton Hospital, Wakefield; Medicus, Leeds; Lucy, Tynemouth; Resident Medical Officer, Lincoln; Medicus, Penge; J. D., Windsor; G. W., Hull; A. B., Brighton; Companion, Cheshire; Percy, London; Zeta, London; M., Accrington; X., London; A. B., Liverpool; Brownide, London; Scapula, London; Kappa, London; R. W., London; Dispenser, London; Immediate, London; Dispensary, Liverpool.

NEWSPAPERS.—*Scottish Leader, Glasgow Herald, Newcastle Chronicle, Sheffield Telegraph, Finance Chronicle and Insurance Circular, Leeds Mercury, Birmingham Gazette, Manchester Guardian, Norfolk Daily Standard, Dundee Advertiser, Toronto Mail, Manchester Examiner, Leicester Chronicle, Bristol Mercury, Yorkshire Post, Scotsman, Liverpool Daily Post, Windsor and Eton Express, Weekly Free Press and Aberdeen Herald, Reading Mercury, Mining Journal, Liverpool Mercury, Surrey Advertiser, Local Government Chronicle, Sunday Times, Kilkenny Journal, Builder, Liverpool Courier, Hertfordshire Mercury, Windsor and Eton Gazette, Broad Arrow, Chemist and Druggist, West Middlesex Standard, Sheffield Daily Telegraph, Metropolitan, Guy's Hospital Gazette, Architect, Spectator, City Press, Law Journal, West Sussex Gazette, Falkirk Herald, Saturday Review, Cambridge Independent Press, West Middlesex Advertiser, Inventions, Birmingham Daily Post, Pharmaceutical Journal, Midland Weekly News, Staffordshire Advertiser, Weekly Mercury, Clonmel Chronicle, Canterbury Journal, Brecknock Beacon, Sporting Times, Crieff Journal, Building News, Cumberland Pacquet, Maidstone Journal, Northern Echo, Boston Independent, North Star, Citizen, Salford Chronicle, Bootle Times, Bournemouth Advertiser, Gravesend Journal, Kentish Express, Speaker, East Kent Gazette, Montreal Herald, Bromley Journal, Lynn Advertiser, Devon Daily Times, Morning Advertiser, Portsmouth Times, World (New York), Yarmouth Gazette, Andover Advertiser, Darlington and Stockton Times, Observer, The Bailie, Isle of Ely Advertiser, Yarmouth Independent, Cheltenham Chronicle, &c.*, have been received.

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THE LANCET SPECIAL SUPPLEMENT ON LIFE ASSURANCE AND THE MEDICAL PROFESSION.

OUR readers have become aware from an article which was published in our impression of Oct. 18th that we have during a fortnight past been collecting from various Insurance Offices doing business in the United Kingdom statements of the facilities which they offer to medical men in connexion with assurances upon their own lives. The following pages contain the results of our inquiries. It will be seen that the responses made have been very various. In some cases the Offices have bestowed considerable attention upon the subject which we have brought under their notice; and in one case, that of the Standard Life Office, the directors have prepared a special table, now published, as they tell us, for the first time, which is specially adapted to meet the requirements of medical men, as set forth in the statement which we circulated. In other cases our inquiry has met with less consideration. So far as possible we have brought all the replies which we have received before our readers, believing that it will be useful to them to know in every case in what spirit our suggestions have been received.

Speaking generally, it may be said that the broad result of the communications which we have received is to show that Life Offices for the most part are not prepared to concede reduced rates to medical men. In this we readily acquiesce. Some of our correspondents have insisted upon the arduous and risky nature of a medical practitioner's duties. We are by no means desirous to shut our eyes to the fact. We think that it would be very unwise on the part of any Life Assurance Office to assume that medical men may be expected to enjoy a lighter mortality rate than that which befals the average policy holder. There is, however, a particular concession connected with this matter of the rate of premium charge, which stands upon a different footing. It is the custom with some Offices to pay a commission to agents for the introduction of business and the collection of premiums. Now this commission is an item of expense to the Office, which may be saved in the case of a policy holder who transacts his business direct with the Office, and not through the intervention of an agent. It seems to us that a medical man putting himself in this position should be entitled to get the benefit of the saving thus effected by the Company. In other words, that where an Office is in the habit of paying commission, and charges its premiums, and conducts its business accordingly, it should be prepared, in the case which we have put, to give to the medical man the benefit of such commission. In the communication which we made to the Offices we put this point forward, and it will be seen that in several instances the Offices have responded as we might expect. They recognise the justice of our contention, and have signified their readiness to adopt the proposal. In other cases the suggestion has been ignored, and in a few the intimation is conveyed that no such concession will be granted. Seeing, however, that certain Offices—and among them Offices of the very highest standing—are prepared frankly to meet us upon this demand, we cannot but think that it would be unwise for a medical practitioner, having this fact at his back, to effect a policy with any Office which pays agency commission, unless upon the terms that he is to receive the commission upon his own transaction. It must, however, be borne in mind in connexion with this point that a certain number of the Offices pay no commission at all, and employ no agents. In such a case a medical practitioner, proposing to assure, cannot of course expect to receive any abatement, but he will secure the incidental advantage of effecting his policy with an Office which, in respect of the important item of agency commission, enjoys an economical advantage over its competitors. He, therefore, in such a case, gets the benefit of the commission indirectly; that is to say, although he does not receive it, he does not pay it, and it will be found upon examination that the Offices which, as a matter of fact, economise in this particular, are among the most economically managed of these institutions. Their rate of expenditure is without exception much below the average rate of expenditure, and the results which policy holders with them secure are proportionately enhanced. In order to give our readers a clear view as to how this matter stands, we have collected in tabular form the names of those Offices which either pay no agency commission at all, or consent to pay such commission to a medical practitioner effecting a policy without the intervention of an agent. The importance of this classification of the Life Offices will be at once apparent.

Another point to which an intending proposer should give great attention is that of the adaptation of the contract into which the Company is prepared to enter to the requirements of his particular case. The preliminary inquiry which we made among our own readers has made it perfectly clear that no one form of policy will meet the requirements of all medical practitioners. There are some, and these are specially to be found among the younger men, who desire life assurance almost exclusively as a protection to those dependent upon them against the disastrous consequence of their own premature decease. In such a case the proposer desires to secure the maximum return in the shape of insurance upon the premium which he is prepared to pay. The largest numerical equivalent of a given premium is secured in the case of a policy which is intended to fall due for payment only in a given contingency. Thus, a policy which will run only for a limited period of time, which will expire when that period is run out, and which will mature for payment only in the event of the death of the life assured within that definite term, yields, if it does mature, a very much larger pecuniary return upon the premium paid than does an ordinary whole-term policy, which is sure to fall in for payment sooner or later; or, again, than the still more costly form of endowment assurance, which ripens at the end of the term should the life assured survive it, or during the term if he should die. Many of our correspondents have indicated that a temporary assurance of this kind, which would protect them for the time being, making comparatively small demands upon the purse and giving them time to accumulate their savings in their own hands, would be a very desirable form of the contract. Few, however, if any, of the Life Offices offer any particular facilities for assurance of this kind. Many of them, as will be seen from the digest of their prospectuses, which occupies another page of this Supplement, provide a temporary assurance table, but in almost all these cases the terms for which insurances can be so effected are too short to meet the requirement. Any Office which grants an endowment assurance policy undertakes two risks—the risk of premature death during the currency of the term, and the risk of being called upon to pay the sum assured to the policy holder should the term be survived. Now, there is no reason in the nature of things why an Office should not undertake either of these risks separately, and in many cases it would be a great convenience to a proposer to be able to provide against premature death

by means of a temporary assurance running for twenty, twenty-five, or thirty years, while he undertakes the accumulation of his own capital by means of investments which he could keep under his own management and control. In reference to this matter, however, we can only point out to our readers that the existing arrangements at the Life Offices are not favourable to such a scheme; for some reason the Offices, though very willing to undertake the double burden of granting temporary assurance and accumulating savings, are very unwilling to undertake the one without the other, and having said that, we must for the present leave the matter there.

Another group of medical practitioners seek, in connexion with life assurance, for some convenient form of investing annual savings, and their requirements have certainly been much more fully met than those of the class to which we have just alluded. It will be seen from the digest already referred to that almost without exception the Offices are prepared to undertake this class of business, and it should be added that a thoroughly sound Life Office is an exceedingly safe custodian of its policy holders' money. Few trusts are more carefully or more scrupulously administered than those which attach to the funds of a first-class Life Office. In this respect, therefore, we are able to introduce to the notice of our readers a much better choice of advantages. There is, however, one consideration which should in this connexion be taken into account, and it is this: although investments made with first-class Life Offices are perfectly safe, yet the rate of expenditure incurred by most Life Offices is such that payment of a premium is not exactly an economical way of accumulating savings. The following illustration will make our meaning clear:—

An Office which publishes a very complete set of tables gives in its prospectus the following two quotations:—

For an endowment assurance of £100 at the age of forty, to be payable at the end of ten years if the life assured survive, or at death should that happen within the ten-year period, £9 9*s.* 7*d.* a year.

For a temporary assurance of £100 at the age of forty, to be payable only at death, and only if death should occur within the ten-year period, £1 11*s.* 2*d.* a year.

Deducting the annual cost of the temporary assurance, we discover what the Office receives for accumulation, and it amounts to £7 18*s.* 5*d.* a year.

Now, if this sum be accumulated at only 4½ per cent. interest, it will amount in ten years to £101 14*s.* The policy holder might, therefore, have done this part of the business for himself, and he would reap the incidental advantage that if he died during the period his representatives would not only receive the sum assured—£100—but would get in addition the proceeds of so many annual differences of premium as he had accumulated in his own hands. For instance, if he died in the fifth year they would receive £100 *plus* the accumulation of four years' savings of £7 18*s.* 5*d.* per annum; and if he died in the tenth year they would similarly receive the accumulation of nine years' savings of £7 18*s.* 5*d.* per annum. These accumulations would be additional to what the Company undertakes by its endowment assurance contract, and purchased at no greater outlay than the tabular premium for such a policy.

Another matter to which several of our correspondents draw attention, and with very good reason, is the advantage which may be secured by effecting a settlement of policy moneys under the Married Women's Property Act. Into the details of this it is the less necessary to enter because we think it may be taken for granted that any Office will be prepared to issue a policy in accordance with the provisions of the statute, and a policy so issued will be protected in any circumstance that may afterwards arise against the claims of creditors; hence it is, so far as such a thing can be, capable of being rendered an absolutely safe protection for the wife and family on whom the benefit is settled. In this, however, as in some other connexions, a word of warning may be ventured: that it is wise to avoid complicated forms of settlement, and to be content with the simplest provisions which will meet the case.

This last remark leads us to another observation of the same kind. In many instances prospectuses have been submitted to us which contain exceedingly complicated forms of the life assurance contract. These complications have been at various times engrafted upon the original simple contract, for the purpose of providing, or appearing to provide, some special advantage to the policy holder. We think, however, that complicated forms of benefit are very likely to occasion disappointment in the end, and we strongly advise our readers, as far as possible, to select the simplest tables, and to give a distinct preference to short and simple forms of policy. A good deal has been done in recent years in the way of getting rid of those numerous conditions, prohibitions, and limitations with which, in former days, the insurance contract was surrounded. Policies which are challengeable when once they have been issued, or after the lapse of a short time, upon no ground but fraud, are now issued by most of the first class Offices; and when effecting a policy the proposer should take care to satisfy himself that the contract into which he enters is of this simple and equitable character.

Turning now for a moment from questions connected with life assurance, we may draw the attention of our readers to the kindred topic of insurance against accident. We have much reason to think that this is a subject which has been somewhat overlooked. For one thing, the practice of insuring against accidents is comparatively new. With very few exceptions, the Offices which lay themselves out to undertake this class of business have been founded within the past few years. The subject is one which has not been as yet brought much to public notice, but we quite concur in the view which is expressed by more than one of our correspondents, among the representatives of the Offices, that medical men are peculiarly exposed to accidents in the operating-room and on the roadside, against which an insurance policy makes an invaluable provision. The communications made to us upon this subject have been grouped by themselves at the end of the Supplement, and will put our readers in full possession of all the material facts upon this point.

One other question remains to be noticed, in a sense the most important of all, and yet one to which it is impossible for us to do full justice. Beyond all other considerations, in the case of selecting a Life Assurance Company at least, the proposer should be guided by a consideration as to whether the Company is solvent, and so placed that he may safely and confidently expect that, when in after years, perhaps after a long interval of time, he or his representatives desire to make a claim upon the Office, there will be funds to meet the demand. The misfortunes which have befallen several Life Offices in past years have emphasised only too cruelly the importance of this consideration. It is of course out of the question for us to attempt to discriminate between one Office and another among those which have responded to our inquiries. We can only advise our readers to be very careful not to be tempted by mere promises or to suffer themselves to be flattered and deluded by sanguine estimates of what the future will produce. The very best test of trustworthiness is severe economy in the administration of business pursued through a long period of years. Where a careful analysis of the annual statement made by a given Life Office to the Board of Trade shows that a large proportion—say 15 per cent. or 20 per cent., or even more, as does sometimes happen—of the annual revenue is consumed in mere working expenditure, it may be taken for granted without more inquiry that such an Office is not likely to work out very satisfactorily for its policy holders in the end—at least, they can get a better return upon their money elsewhere. There are Offices which contrive to manage their business at an expenditure upon commissions and costs of management of no more in the aggregate than 5 or 10 per cent. of their annual income. Where such a result can be shown to have been attained year after year for a sufficient period of time to give a reasonable confidence that it represents the settled course of business, the question of economy may be taken as decided in the Company's favour; but until this test has been applied to the selected Office no assurance proposal should be even contemplated by a cautious man.

The matter for the following paragraphs has been supplied by the respective Offices—a circumstance which will account for its being, in some instances, thrown into the form of correspondence addressed to ourselves.

ABSTAINERS AND GENERAL INSURANCE COMPANY, LIMITED,

Colmore Chambers, Newhall-street, Birmingham.

This Company does not encourage the practice which obtains in some assurance offices of offering special terms to persons following any particular profession or calling, and

has not done so in the case of members of the medical profession.

You will notice that the rates in the prospectus of the abstainers' division, though with "immediate profits," are as low as the non-profit rates of many offices, and having made so considerable a reduction in the premiums for all persons who abstain from intoxicating liquors, we do not propose to make further concessions. As our agencies are limited to abstainers, and the number of medical men who abstain is still proportionately small, we should frequently in practice recognise an abstaining doctor as an agent, as we should for obvious reasons desire to keep him in touch with the Company and its clients.

This Company was formerly known as the Blue Ribbon Life, Accident, &c, Insurance Company, Limited.

ATLAS ASSURANCE COMPANY,

92, Cheapside, E.C.

The Atlas Assurance Company, established in 1808, has always been a prosperous institution, and although its rates of premium are below rather than above the average, it has always given large bonuses to its policy holders. In the valuations the most stringent tables of mortality anywhere in use are employed, and interest is assumed at only 2½ per cent. All the interest earned over 2½ per cent. (and the investments produce more than 4 per cent.) is available therefore for the profit fund. The large reserves of the Company have been accumulated from the premiums of former generations, and those who assure now at once share in the surpluses which these reserves produce.

On account of the wealth of the Company, it is possible to offer many unusual facilities to the assured. There is a practical certainty of large bonuses in the future, and a scheme has been introduced under which the bonuses are discounted and applied in immediate substantial reduction of premium, with the result that policies are granted at lower rates than those of any other Company. This plan exactly meets the requirements of those who desire the largest possible assurance for the smallest present outlay. The system has been adapted to ordinary whole term assurances, to assurances by a limited number of premiums, and to endowment assurances.

Those who prefer may take bonuses as additions to the sums assured; or they may place the bonuses in a tontine, and so secure a very large benefit should they survive to a stipulated age, the sum assured being paid on death whenever that event may occur. In various other ways the bonuses may be dealt with to meet the special views of different individuals. The greatest elasticity is allowed, compatible with the interests of the policy holders generally.

To medical men in practice in the United Kingdom policies are issued free from all restrictions as to travel and occupation, and without extra premium; so that the assured may proceed to any part of the world, and engage in any occupation, without requiring to apply to the office for license. To medical men serving in the army or navy, or in the mercantile marine, policies are granted free of extra premium, on special conditions which are fully set out in the Company's naval and military prospectus.

It would appear, therefore, that, whether the object be to secure the largest immediate assurance or the largest future accumulations in proportion to the premiums paid, the Atlas stands in the front rank. It, moreover, so arranges its form of contract as to meet individual circumstances.

If outside the various provisions of the prospectus any definite suggestion should be made by members of the medical profession, the directors will give it their most friendly consideration.

BRITISH EQUITABLE ASSURANCE COMPANY,

Queen Street place, London, E.C.

One special advantage for medical men is our Payable Earlier Bonus Scheme for applying profits, to making policies payable in lifetime. This is popular with those who find endowment assurances too expensive. Another is the rule that if a professional man assures his life, not through any agent, but at the head office, he will receive ordinary agent's commission. We also have policies payable at death, which are paid by limited premiums.

CHURCH OF ENGLAND ASSURANCE INSTITUTION,

9 and 10, King-street, Cheapside.

The policies of the Institution are divided into two classes—Participating or Mutual, and Non-participating.

The Participating policy holders are entitled to the exclusive enjoyment of the entire profits of their own branch. They thus receive all the advantages of mutual assurance, and, in addition, the protection of a large proprietary capital. This practice of dividing among the with-profit policy holders the whole of the profits of their own branch, ensures to them assurance at the actual cost; for that portion of the premiums paid, which is found to be more than sufficient to provide for the due payment of the sum assured, is returned in the form of bonuses, no deduction whatever being made therefrom for the benefit of share holders.

The rates charged by the Institution under its Whole Life Tables (the most usual form of assurance) will be found to be exceptionally low.

Whole life policies by limited payments, the premium ceasing after a given number of years, offer the following important advantages:—

First. The assured is enabled to pay up the whole of the premiums during the most active period of his life, and is thereby freed from further payments.

Second. The assured can never lose the benefit of the payments he has made, as these policies are non-forfeitable, and each premium renders a corresponding proportion of the sum assured perfectly free from all future premiums.

The Institution's endowment assurance policies also are non-forfeitable.

The system of free assurance introduced by the Institution some years since offers the following advantages:—

First. If the assured live until he has paid in premiums an amount equal to the sum assured, he is thenceforth freed from all future payments.

Second. If desirous of discontinuing his payments at any time after the first year, he can do so without losing the benefit of the payments already made, as in that case he will be entitled to a free or paid-up policy for the whole amount of his actual payments.

The practice of the Institution has always been marked by the utmost freedom and liberality, the directors believing that the convenience of the assured should be the main object of consideration.

CITY OF GLASGOW LIFE ASSURANCE COMPANY,

30, Renfield-street, Glasgow, and 12, King William-street, London.

Established 1838. Incorporated by Act of Parliament. Funds, £1,717,263; subscribed capital, £600,000; paid-up capital, £60,000; annual premium income, £165,856. Claims paid, £3,180,975.

Grants policies payable at death, with or without profits, premiums under which may be made payable till death or limited to a fixed number of payments—say, five, ten, fifteen, twenty, twenty-five, or thirty; also policies, with or without profits, payable at death or at a given age—say, fifty, fifty-five, sixty, or sixty-five; and policies, payable at death or at the end of a fixed term—say, ten, fifteen, twenty, or twenty-five years. The bonuses on these policies are the same as on policies payable at death only, and the vested bonuses are payable in full, along with the sum assured, either at death or when the specified date or age is reached. These policies afford a provision to those dependent on the assured for the full amount of the sum assured (and vested bonuses) from the day the policy is opened till the specified age or date is reached, when the

full sum assured and bonuses are paid to the assured himself if he be alive, thus forming a provision for his old age, which he can either receive in cash or invest in the purchase of an annuity from the Company (at age sixty, £500 would purchase an annuity of £49 4*s.* 2*d.* per annum for life). The Company's bonuses are declared every fifth year (intermediate bonuses are also given should the policy become a claim between the periods of division). At the last division in 1889, the rate of bonus for the five years then ended ranged from £1 5*s.* to £2 1*s.* 2*d.* per cent. per annum on the sum assured.

The rates of premium are moderate, and the bonuses high in comparison with the premiums charged.

The Company's conditions include — paid-up policies granted to those ceasing payments, minimum surrender values fixed, free foreign travel, free foreign residence in most parts of the world, immediate payment of claims.

CLERGY MUTUAL ASSURANCE SOCIETY,

2 and 3, The Sanctuary, Westminster.

This Society was founded in 1829 on strictly mutual principles, and is conducted solely for the benefit of the clergy of the respective Churches of England and Ireland and of the Episcopal Church in Scotland, together with their near relatives. It has never entered into unwholesome rivalry with other insurance societies, but has trusted to its intrinsic merits and exceptional advantages. Without the employment of agents or the payment of any commission, it annually attracts a fair share of solid business, the average for many years having been slightly over £300,000 a year.

At the present time it has on its books 9528 life policies, assuring the sum of £8,121,954, and to provide for the ultimate liability under these policies it has an accumulated fund of £3,589,181 and an annual income arising from premiums and interest amounting to £371,000. The financial position is acknowledged to be unimpeachable.

The distinctive features of the Society which merit the close attention of intending assurers are:—

1. No agents have ever been employed or commission paid for the introduction of business.

2. The expenses of management are on a remarkably low scale, averaging 6 per cent. on the premium income.

3. The business is chiefly with the clergy, among whom the death-rate is very much lower than among the general community.

The premiums charged are lower than those of the great majority of assurance societies, a fact which should be carefully borne in mind in considering the question of bonus.

The following statement compares the profit divided on the three last occasions with the total life premiums received:—

Quinquennium ending 31st May.	Total life premiums received in the five years.	Surplus divided.	Percentage of total life premiums received.
	£	£	
1876	841,717	343,140	40·8
1881	991,682	437,347	44·1
1886	1,087,360	486,000	44·7

The bonuses declared are thus on a very high scale.

We understand that the Society is about to grant endowment assurances—namely, assurances payable at a specified age or at earlier death,—and that the premiums will be lower than the general average. Of the prospects of bonus a sanguine expectation may be formed from the statement made above.

A very large number of the members of the medical profession, being relatives of the clergy, are qualified to share in the exceptional facilities of the Society.

CLERICAL, MEDICAL, AND GENERAL LIFE ASSURANCE SOCIETY,

15, St. James's-square, London, S.W.

Annual income, £334,474; assurance fund, £2,808,935; claims by death already paid, £5,659,956.

This Society, by virtue of its origin, its objects, and its constitution, claims to have a special affinity with the medical profession. Founded by a distinguished physician for the purpose of dealing with impaired as well as healthy lives, its constitution ordained that, for the safe and more equitable conduct of its business, eight out of its seventeen directors should always be medical men, and it has ever had at its service the highest medical skill. Its present medical directors are—Sir Wm. Bowman, Bart., LL.D., F.R.S. (deputy chairman), Dr. Lionel S. Beale, F.R.S., Sir Prescott G. Hewett, Bart., F.R.S., Professor Humphry, F.R.S., Sir Wm. Jenner, Bart., G.C.B., F.R.S., Sir Jas. Paget, Bart., D.C.L., LL.D., F.R.S., Dr. Douglas Powell, and Dr. W. O. Priestley, LL.D.

As was natural, it was among the earliest to recognise the principle of paying fees to medical attendants when consulted; while now it follows the probably unique practice of consulting medical attendants in all cases, and of allowing the full fee of one guinea for each report. For the high place it holds in the favour of the medical profession, it depends, however, less on these personal considerations than on that general excellence which both deserves and commands support. Its security is based on reserves as ample as any known to assurance practice; its profits, notwithstanding its moderate rates for all forms of assurance, are so large and well sustained that it is able, at its periodical divisions, to return in cash one premium out of every three premiums paid; while its form of policy, from which all restrictions are removed, is so absolutely simple that the payment of the stipulated premium is the sole condition on which the maintenance of the assurance depends.

Though the Society has the advantage of the service, as agents, of many members of the medical profession, who are, of course, remunerated as agents, it does not offer special terms of assurance to them, or to any other class of the community.

COLONIAL MUTUAL LIFE ASSURANCE SOCIETY, LIMITED,

33, Poultry, E.C.

This Society was established in the year 1873, and during the seventeen years of its existence has attained the position of second in respect of new business completed during the year 1889 among all the Life Offices transacting business in the United Kingdom, and has accumulated funds which now amount to over £1,050,000
Its annual income exceeds £370,000

Being a Mutual Office, all the profits belong to the members, while at the same time the Articles of Association provide "that no liability attaches to them, the funds of the Society alone being liable for claims &c."

Premiums are exceedingly moderate. The rate at age thirty next birthday is only—
Under the whole Life Table ... ... £2 4 8 per cent.
Under the 20 years' Endowment Table 4 10 6 ,,
Under the 20 years' Limited Payments Table ... ... 3 0 7 ,,

The bonuses are handsome, while the low rate of premiums secures a larger sum assured at the outset than can be obtained from the majority of Life Offices for an equivalent payment. For example:—
Office A, at age 30, whole life assurance charges per cent. £2 11 9
As compared with the Colonial Mutual Society's rate per cent. of £2 4 8
Or, in other words, for an equal premium paid to each Office at age thirty, the Colonial Mutual can grant a policy for £1160 as against £1000 in A Company, thus securing to the assured an immediate advantage of £160.

All policies are absolutely non-forfeitable and incontestable from the time of issue, and no restrictions exist as to

voyaging, travelling, or change of occupation or residence when once a policy is issued. In short, the policy of the Colonial Mutual contains no conditions whatever beyond the necessary payments of premiums.

The Colonial Mutual is the only British office transacting tontine life assurance business. The tontine system provides a cheap form of endowment, thus:—

A person may take out a policy at whole life rates, with the privilege at the end of fifteen or twenty years of realising his own savings in any one of the following modes of settlement.

1st. To make a final cash settlement terminating the assurance, and take the cash surrender value of the policy.

2nd. To take the equivalent of the cash value of the original policy in a paid-up policy upon which no further payment of premium is required.

3rd. To draw out in cash all the divisible surplus as ascertained by the Society's rules (over and above the amount reserved to protect the original policy), and to continue the assurance for the original amount by paying the premiums when they fall due, the policy participating in bonuses like an ordinary policy after the conclusion of the tontine period.

4th. To continue the original policy of assurance and convert the accumulated surplus into an annuity, which, with future bonuses, it is estimated will materially reduce, and in many cases altogether extinguish, subsequent premiums.

5th. To apply the cash surplus (if the person whose life is assured continues in good health) to the purchase of an additional assurance (paid up) and continue to pay the same premiums as heretofore, less periodical bonuses or dividends.

6th. To use the entire value of the policy to buy an annuity for the after-lifetime of the assured.

In the event of premiums being discontinued at any time after more than three years' premiums have been paid, the policy may on application be surrendered, and a liberal surrender-value obtained, either in cash, or a paid-up policy issued in lieu thereof for an amount equivalent to the cash value. Policies in the Colonial Mutual cannot lapse so long as the surrender-value is equal to one quarter's premium. The Society has upon more than one occasion paid claims while the policies were in this state of forfeiture, although the representatives of the deceased members believed the policies to have lapsed.

The average rate of interest earned by the Colonial Mutual Society on investments during 1889 is about 6½ per cent., more than half as much again as the rate assumed throughout the valuation, which was 4 per cent.

The profits at the last quinquennial investigation in 1889—the reversionary equivalent of the cash surplus—amounted to over £300,000, being three times the amount declared at the preceding investigation in 1884.

EAGLE INSURANCE COMPANY,

79, Pall Mall, London, S.W.

My directors would not be able to offer any more favourable terms to members of the medical profession, especially when account is taken of the many special risks to which they are constantly exposed.

ECONOMIC LIFE ASSURANCE SOCIETY,

6, New Bridge-street, Blackfriars, London, E.C.

The Economic is a Mutual Society, founded under a deed of settlement dated May 31st, 1823, and empowered by Act of Parliament, 3 William IV., cap 66. It affords perfect security, while at the same time it is expressly provided that a member of the Society incurs no personal liability. On Dec. 31st, 1888, the Assurance Fund amounted to £3,596,468, which, without taking into regard future premiums payable, and allowing for annuities of £2012 per annum, is at the rate of £36 16*s.* 9*d.* per cent. on £9,749,432, the total sum assured with bonus additions, including those declared as on that day.

Though the Society's object is not to divide large profits but to grant assurance at the lowest cost, the success of the Society has been such that, in all, reversionary bonus amounting to £4,711,849 has been granted to the assured. The surplus is divided every fifth year, and all participating assurances, on which one or more maximum premiums have been paid, share, though the bonus does not vest until after such premiums have been paid for five years.

The mode of division secures to each member not only a share in proportion to premiums paid in the quinquennium, but a further amount is allowed for the increase in his age, as well as for former bonus remaining attached to the policy, so that policies as they extend in duration increase considerably in participation at each succeeding quinquennial period. In addition, interim bonus will be added to policies entitled becoming claims before the next division as on Dec. 31st, 1893. Bonus may in most cases be taken, if preferred, in the form of cash, or reduction of premium.

Endowment assurances can be effected either with or without participation: they secure immediate provision for relatives in the event of early death, while affording also an absolutely safe investment or savings fund, realisable in the event of living to the selected age.

A surrender value may be applied in taking out a paid-up policy (if not less than £100) without further evidence of health.

Loans on policies are granted to absolute holders (not mortgagees), if the amount, depending on the surrender value, be not less than £10; and if never assigned or otherwise dealt with, the only expense will be the stamp duty.

Detailed prospectus (with specimens of bonus and various rates of premium), accounts, and full information, may be obtained on application to the chief office, or any branch office or agent.

Applications for agencies are invited from professional men and others. Commission is allowed to solicitors bringing assurances to the office.

THE EDINBURGH LIFE ASSURANCE COMPANY,

22, George-street, Edinburgh, and 11, King William-street, E.C. (Founded 1823),

has a scheme which is largely adopted by medical men. It is thus described:—

"A medical man aged thirty, by paying £28 18*s.* 4*d.* yearly, can secure £1000, to be paid to himself at the age of sixty, or to his representatives if he die before sixty.

"Suppose that he dies at the age of fifty, leaving a widow of the same age; if she be a delicate person, she will rather take the £1000 in cash than a pension which will terminate with her life; if she be healthy, she may choose to exchange the £1000 for a life income, in which case she may have £65 11*s.* 8*d.* yearly while she lives.

"Should the husband live to sixty, he may similarly either take the £1000 in cash or exchange it for a yearly income of £93 1*s.* 8*d.* during his own life, or of £84 during his wife's life, or of £67 11*s.* 8*d.* as long as either of them is alive."

The Company has also adopted an additional scheme of double benefit, by which twice the amount payable in the event of death will be paid on reaching sixty, or whatever age may be fixed. Thus, a medical man in his thirtieth year, by paying £33 10*s.* annually, may secure £1500 at the age of sixty, or £750 if he dies before that age; and proportionately for larger or smaller contributions. At the age of sixty, £1500 would provide a pension of about £140, according to present rates.

To meet the case of a medical man launching into practice and anxious to provide as largely as possible against the chance of premature death, the Company's "half-premium" table secures an assurance at little more than half the usual cost during the first five years, the rate afterwards being less than that for a fresh insurance. The "terminable

premium plan," involving no more than the usual rate of whole-life premium, meets the views of those who desire to be relieved in old age of their annual payments.

ENGLISH AND SCOTTISH LAW LIFE ASSURANCE ASSOCIATION,

12, Waterloo-place, S.W.

The English and Scottish Law Life Assurance Association was established in 1839, and can point to a career of fifty years of continued and increasing prosperity.

Its financial position is impregnable, the invested funds exceeding £1,600,000. The Association offers practically all the advantages of a mutual office, inasmuch as one-tenth only of the profits of the life business falls to the share holders.

In return for this the assured have the guarantee of a fully subscribed but uncalled capital of £930,000, in addition to the security afforded by the invested funds, thus making assurance doubly sure.

Among many features making it an office peculiarly suited to the requirements of the medical profession may be mentioned:—

1. Its extremely low rates for "without profit" policies. In many cases the object which the professional man has in view in insuring is to provide for his family in the event of his death during the early years of his professional career before the opportunity of making provision in other ways has arisen, and this office, offering as it does the largest possible immediate benefit in return for the smallest possible premium, will commend itself to those having this object especially in view.

2. Still further to facilitate the attainment of the above result the Association allows, when so desired, one-half of the premium payable during the first five years (or other period as may be arranged) to remain as a debt upon the policy, the amount being deducted from the sum assured upon the policy becoming a claim, or the debt may be repaid at any time at the option of the policy holder.

This system can also be made available at any time during the currency of an assurance not originally effected upon this basis, an arrangement which would prove very useful in the event of the assured meeting with any temporary difficulty, making payment of the full premium for any short period inconvenient.

3. "Double benefit" assurances are a distinctive feature of this office. Under this scheme a sum can be assured to be payable at a given age or earlier death, and, in addition, should that age be attained a further equal amount will be payable at death, although the premiums cease. This mode of assurance of course requires a higher rate of premium.

4. Attention is also directed to the facility with which the Association's arrangements for advances on personal security, coupled with life assurances, can be utilised by gentlemen of good social position, to whom advances (for the purpose, *inter alia*, of purchasing practices), repayable in easy instalments, can be made on the personal covenant of the borrower and two or more substantial sureties.

5. The liberal conditions of the Association with reference to foreign residence and travel are specially advantageous to gentlemen holding or seeking colonial, naval, or military appointments.

6. Endowment assurances (maturing at a given age or earlier death), which serve the double purpose of (1) providing for the family of the assured in case of his premature decease; and (2) in case of his survival beyond the age agreed upon, the provision of a capital sum for the assured himself, or this may, at his option, be sunk in the purchase of an annuity from the Association, whose annuity terms will be found exceptionally favourable to purchasers.

7. Endowments for children (payable at age of twenty-one or other period, as may be agreed upon), by which provision may be made for their professional education, establishment in business, or other advancement.

8. All claims are paid *immediately* on proof of death and title.

EQUITABLE LIFE ASSURANCE SOCIETY,

Mansion House-street, London.

Invested Funds, £4,250,000.

The Society was established in 1762 on the mutual principle, so that there are no share holders to take any portion of the profits; and as, moreover, it has always abstained from employing agents or paying commission, the middleman is entirely eliminated, and the members obtain the full benefits arising from the principles of pure coöperation. The results are seen in the extremely large bonus additions, of which a summary is given:—

Date of policy.	Sum originally payable.	Sums payable, including additions, on Jan. 1st, 1890.
	£	£
Jan. 1, 1830	1000	3590
,, 1840	1000	3020
,, 1850	1000	2625
,, 1860	1000	2117
,, 1870	1000	1560
,, 1880	1000	1180

These figures show that a policy in the Equitable is a good investment. If a man who, having assured at age thirty, lived for the period known as the "expectation of life," and died at age sixty-four, the amount payable under his policy would exceed the amount paid in premiums accumulated at 4½ per cent. compound interest.

Policies may be surrendered at any time for their full reserve value, so that the benefit of an endowment assurance is secured, with the further advantage that the contract is of a more elastic character, inasmuch as it may be terminated at a fixed age or continued longer at the pleasure of the assured.

A new system of Reduced Payments is specially recommended to persons desirous of obtaining the largest immediate assurance at a small outlay, and who, at the same time, wish to participate in the large bonuses for which the Equitable is renowned. Under this system the member is only called upon to pay down 75 per cent. of the ordinary premium, so that practically he obtains the advantage of an immediate reduction of 25 per cent.; or, in other words, he can, by means of the same annual outlay, effect a policy for £1250 on this system against one for £1000 on the ordinary system.

The balance of premiums—namely, 25 per cent.—is advanced by the Society, and forms, with accumulated interest, a debt on the policy to be discharged out of bonus additions.

THE EQUITABLE LIFE ASSURANCE SOCIETY OF THE UNITED STATES,

81, Cheapside, E.C.

The Equitable Life Assurance Society of the United States base their claim for support of their tontine system of life assurance on the grounds that the division of profits under that system is more equitable than under the system by which those dying early receive a greater proportion of benefits at the expense of those that live.

The cheapest policy issued by this Society, maturing in 1890, shows a terminable insurance at the lowest rate, whereas a limited payment policy shows an investment of 3½ per cent. compound interest, thus enabling those who require it to obtain maximum insurance with endowment options at a low cost, and meeting the requirements of the medical profession, who require large policies at low cost ceasing at advanced age.

EQUITY AND LAW LIFE ASSURANCE SOCIETY,

18, Lincoln's-inn-fields, London, W.C.

The Equity and Law Life Assurance Society does not profess to give special advantages to any particular class. Its share holders are all members of the legal profession, but for assurances it appeals to the public generally. It grounds its appeal on its strong position and its success in the past. Its invested assets are upwards of £2,300 000. It has valued its liabilities by the Combined Institute Tables, with 2¾ per cent. interest as to the greater part, and its bonuses have been such as to double a whole life policy effected at the younger ages in about thirty-five years, or in the case of endowment assurances, to show a return equal to an accumulation of the premiums, at about 4 per cent. interest. Its policies are in most cases world-wide and unconditional, and its rates of premium moderate—for example, at the age of twenty-five the whole life, with profit rate, is £2 3*s.* 2*d.*

FRIENDS' PROVIDENT INSTITUTION,

Bradford, Yorkshire.

The Friends' Provident Institution was established in the year 1832. Membership therein is limited to the Society of Friends and its immediate connexions.

Its scale of premiums is an exceptionally moderate one, being based upon statistics of mortality compiled from the death registers of the Society of Friends—a body of persons well known to show a very favourable record in the matter of vital statistics.

The speciality of the office is the great economy which has always been characteristic of the management.

The ratio of working expenses (including commission) to the premium income averages only about 8 per cent.

This feature, combined with the favourable mortality experienced, has resulted in the realisation from time to time of large surplus funds, which have been distributed to the assured by way of bonus.

A division of surplus is made every five years. The whole of the profits are divided amongst the assured. There are no share holders to absorb any portion of the surplus funds, the constitution of the office being purely mutual.

The Institution grants ordinary whole-life assurance policies, the premiums on which are payable either during the whole term of life or during a limited period only.

It also grants endowment assurance policies, payable at a specified age or at death.

All the ordinary forms of life assurance are undertaken by the office, with the exception of business at "non-profit" and "half-credit" rates.

GENERAL LIFE ASSURANCE COMPANY,

103, Cannon-street, London, E.C.

I have submitted to the directors your request for particulars of the terms offered by this Company to members of the medical profession for the insurance of their lives, and have to inform you that the Board have not authorised me to make you any communication on the subject.

GUARDIAN FIRE AND LIFE ASSURANCE COMPANY,

11, Lombard-street, E.C.

Established 1821. Paid-up capital, £1,000,000. Life Fund, which is held as a separate Trust for the benefit of the Life policy holders, £2,461,000.

The Company's prospectus has been prepared with the view chiefly of meeting the wants of the professional and middle classes, and the circumstances of the medical profession do not appear to differ from those of such classes generally. The Company gives no preference to any class of its policy holders, and does not accept lives at less than its published tabular rates. The only good reason for doing so would be that some particular class has exhibited a specially light mortality. That this is not so in the case of the medical profession is well known. In a letter to the Registrar-General by Dr. Wm. Ogle, contained in the Supplement to the Forty-fifth Annual Report of the Registrar-General, the following words occur, "The comparative mortality figure for the legal profession being 842, and still higher again is that of the medical profession, which is no less than 1122, and exactly as high as that of slate and stone quarrymen." In the absence of any superiority of the vitality of medical men, any abatement or special advantage given to them would practically have to be paid out of the bonuses of the other policies, which is the only fund upon which any so-called "liberal" concessions can fall. If a company is prepared to put sound principle to one side it is a simple matter to make such concessions, but they are obviously unjust to those policy holders who pay the full tabular rates.

The two classes of assurance that are probably best suited to professional men who may have to retire from the active pursuit of their occupation at between sixty and seventy are Endowment Assurances payable on attaining a certain age or at previous death, and Assurances for the whole term of life where the premiums are paid up by a limited number of payments. The Company's system of division of the profits among the policy holders is based upon the principle of returning to each policy holder the amount which he individually has contributed to the divisible surplus, and gives to these classes of policy holders their fair share of the profits—that is to say, a larger cash bonus than is given to those who take out ordinary whole life policies with premiums payable throughout life. The last quinquennial valuation, 1889, was made on the basis of the Institute of Actuaries' H^m and H^{m^5} Tables of Mortality and 3 per cent. interest, the net premiums only being valued and the whole of the loading reserved. New reversionary bonuses amounting to £358,792 were added to 6152 participating policies assuring, exclusive of existing bonuses, £4,560,415, the annual premiums payable under which amounted to £140,821 10*s.* 9*d.*

HAND-IN-HAND FIRE AND LIFE OFFICE,

26, New Bridge-street, London, E.C.

We should be willing to allow to members of the medical profession who come direct to us, and not through the intervention of an agent, a commission of 20*s.* per cent. on the sum insured for whole life and endowment insurances, not half credit. On these latter the commission would be 10 per cent. on the premium paid for the first year, and 5 per cent. on renewals, calculated always on the premium actually paid.

THE IMPERIAL LIFE OFFICE,

1, Old Broad-street, E.C.

Established in 1820. It offers to the medical profession and to the public a new system of assurance, which combines the advantages of death indemnity and old age investment (or alternative pension) with a very low rate of premium. The scheme is best illustrated by an example:—

A, age thirty, assures for, say, £2000, payable if he dies before attaining the age of sixty, and at that age, if he survives, he has the choice of the following options:—

1. He may (subject to the regulations in Prospectus) secure a paid-up policy estimated to amount to £2756, to which additions will be made out of future profits.

2. Or he may draw a single cash payment estimated to amount to £1072 (or an alternative pension of £97 17*s.*), and besides retain a paid-up assurance of another sum of £1072, carrying the right to future bonus additions.

The annual premium to secure these benefits is £50 11*s.* 8*d.*, and all premiums cease at the age of sixty. Special attention is directed to the low rate of premium—per cent. £2 10*s.* 7*d.*

It is a speciality of this Company to grant intermediate pensions, depending on the number of payments made, if ill-health prevent the future premiums being paid.

LANCASHIRE INSURANCE COMPANY.

Head Office, Exchange-street, Manchester.

This office was established in 1852. Capital £3,000,000; life reserves £817,350.

Quinquennial valuations. Bonus declared in 1889 at the rate of £1 7*s.* 6*d.* per cent. per annum on profit policies, together with provision for intermediate bonus of £1 per cent. per annum on policies of ten years' standing, should death occur during current quinquennium.

Liberal conditions regarding travelling and residence

abroad; whole world and unchallengeable policies; immediate payment of claims after proof of death and title. Provision is also made for loan of premiums where policy holders, from some temporary cause, are unable to pay them.

The Company's prospectus includes tables of premiums for various descriptions of life assurance.

To that considerable body of medical men who in starting wish to provide as large an amount as possible in case of premature death at a small premium, this Company's Table III. is specially applicable.

Example.—£1000 may be assured under this table on life aged thirty years next birthday by an annual payment of £13 10*s.* during each of the first five years, and £27 10*s.* during remainder of life, the policy being entitled to share in profits after payment of the sixth premium. In approved cases the five years might be extended to seven.

To those assurers who desire their declining years should be relieved from the payment of premiums this Company's Table IV., showing premiums limited to ten, fifteen, and twenty years, is applicable.

Example.—£1000 may be secured under this table on life aged thirty years next birthday by payment of an annual premium of £50 5*s.* during ten years, or £37 5*s.* during fifteen years, or £30 15*s.* during twenty years. Under this table, also, it is provided that should the assured wish to discontinue his policy, say, at the end of five years, and to be relieved from payment of all future premiums, the amount assured would simply be reduced to the proportion which the premiums paid bore to the full premiums payable—viz., £500, £333 6*s.* 8*d.*, or £250.

To those who wish to combine with assurance the accumulation and payment to them at a given age of annual savings, Table V. is suitable.

Example.—A person aged thirty years next birthday may insure £100 at age fifty by paying annually £5 5*s.*, or at age sixty by paying annually £3 10*s.* 6*d.*, and should he not survive the specified age, the £100 would be paid at death to his representatives.

THE LEGAL AND GENERAL LIFE ASSURANCE SOCIETY,

10, Fleet-street, E.C.

This Society was founded in 1836, and has now an income of about £250,000 and funds amounting to £2,345,000. The Society in 1886 introduced its perfected system of life assurance, and under that system has transacted a very large new business.

The three points for an insurer to consider are: (1) Security; (2) liberality of conditions; and (3) the prospects of bonus or profits.

The security offered by the Legal and General is very great, and, in addition to the invested funds, there is the capital of the Society of £1,000,000, all of which is held by members of the legal profession, and of which only £160,000 has been called up.

The second point for consideration is the conditions of assurance. The policies of the Society are free from all conditions and restrictions, and afford a simple contract providing for the sum assured in return for a specified premium. (A copy is furnished to all proposers.) This is a point of great importance to medical men, whose duties often call them abroad. Policies are also "indisputable," and cannot lapse by non-payment of the premiums as long as any surrender value attaches to them. The third point is the prospect of bonus or profits.

The bonuses given by the Society have always been very large, and there is every probability of their being maintained or increased, as the Society's valuation has always been at a low rate of interest—3 per cent.—and by the most stringent tables, those known as the Actuaries' H^m and H^{m5} being employed on the last occasion.

The consequence of employing these stringent methods of valuation is to provide a larger reserve in proportion to the liabilities and to safeguard every interest.

The Society grants annuities, both immediate and deferred, endowments, and all kinds of assurances dependent on life.

Every information is furnished by the Society free of charge, the forms used are of the simplest description, and every effort is made to expedite business. The chief office of the Society is at 10, Fleet-street, London.

LIFE ASSOCIATION OF SCOTLAND.

82, Princes-street, Edinburgh.

London Offices: 5, Lombard-street, and 123, Pall-mall.

The Life Association of Scotland has a scheme called "Investment-Assurance," which is peculiarly well adapted to meet the requirements of gentlemen engaged in the medical profession, securing, as it does, immediate life assurance at a moderate cost, with a capital investment for savings, and an ultimate valuable provision for the old age of the policy holder himself. By effecting a policy in this class, a medical man can therefore not only provide for those dependent upon him at his death, but at the same time he can look forward, should he not die before the average period, to having a Pension for himself, payable during the later years of his life, when he may possibly want to retire, either wholly or to some extent, from active practice. The premium is only the ordinary "with profit" premium, payable throughout life, and the principle carried out in the system is this: That the profits are reserved and accumulated for the exclusive benefit of those of the assured who attain the average "expectation of life" of persons of their age at entry; the result being that all those who survive their "expectation" secure very large bonuses, the additions to their sums assured far exceeding what can be obtained under any of the ordinary systems—see examples in the Association's prospectus. The profits are allocated every five years in the form of contingent additions to the sum assured, payable at death, provided that does not occur before the assured's "expectation of life" has been attained. Immediately on his surviving his "expectation," the policy holder may deal with the bonuses as he thinks best, and he may then either allow them to remain as an increase to the sum assured, payable at death, or he may have them converted into an equivalent cash payment, or into a pension of important amount for the rest of his life. At each of the past five quinquennial divisions of profit—that is, since the commencement of the class in 1860—the contingent bonus additions made to the sums assured have been at the rate of £4 per £100 per annum, payable as above mentioned, and, assuming that this rate of bonus will be continued in the future (as to which, of course, no guarantee can be given), the following is an illustration of the benefits under a £1000 policy effected at age thirty next birthday at entry:—

Age at entry 30.
Annual premium £25.

Sum assured, payable at death whenever it happen, £1000.

"Expectation of life" will be attained in 34 years from entry—that is, at age 64, when bonuses vest.

The total premiums paid up till then will be	£850
The bonus additions to the policy will then amount to	£1360
Making the total sum assured and bonuses payable at death	£2360
The policy holder will then have the option of exchanging the policy and bonuses for a paid-up policy of	£1972
Or a cash payment of	£1207
Or a pension during life of	£127
Or he may continue the policy at the same premium and exchange the bonuses alone for a cash payment of	£832
Or a pension during life of	£87

A table of similar illustrations of the results for entrants at every age, and copies of the Association's prospectus and tables of rates may be had on application.

A policy in this class is virtually world-wide and unconditional, and every practical facility and privilege has been extended to the policy holders.

LIVERPOOL AND LONDON AND GLOBE INSURANCE COMPANY,

7, Cornhill, E.C.

With reference to your circular letter of Nov. 5th, I enclose one of this Company's prospectuses. There are tables therein for: Whole term, with profits (B); whole term, without profits (A); whole term, endowment assurances (G and H); temporary assurances (C); whole term, limited payments (E and F); which I gather from your article of Oct. 18th last are those descriptions of life assurance which appear the most desired by the medical profession, and from whom the directors have at all times been ready to receive proposals upon the same favourable terms which have been conceded to the rest of the community. As regards the medical profession generally, the "few correspondents of THE LANCET who look upon any offer of special advantages with suspicion" are, in my opinion, by no means unjustified in the view which they have formed, and to which they would find more numerous adherents upon deeper consideration being given to the subject by their professional brethren, it being clear that it is most difficult to grant what are termed special terms to one class of men without doing injustice to others from whom such concession may be withheld. For example, doctors could hardly be expected to give their support to any scheme dispensing with medical examinations, whilst some other classes are glad to have found a precedent for such a course, unmindful of or uncaring for the fact that they place the other assured at a disadvantage.

LONDON ASSURANCE CORPORATION,

7, Royal Exchange, London, E.C.

It is our practice to treat *all* the policy holders with equal fairness, and not to give any section of them advantages which cannot be enjoyed by the whole body.

LONDON AND LANCASHIRE LIFE ASSURANCE COMPANY.

Established 1862. Head Office: 66, Cornhill, E.C.

DISTINGUISHING FEATURES.

1. Low rates of premium, as shown by the following special rates, for an assurance of £100 for the whole term of life, with profits, declared every five years.

Age next birthday.		
25	35	45
£2 0 10	£2 13 7	£3 12 5

The average reversionary bonuses varied from £1 to £1 10*s.* per cent. per annum, and, based on the last division of profits, were equivalent to about 60 per cent. of the premiums paid during the quinquennium.

2. A new scheme of endowment assurance, particularly adapted to the requirements of medical and other professional men, offering special advantages to those who are desirous of creating a fund available in later years, combining a family provision with a good investment or an annuity for life.

The following table shows the benefits that may be secured by an endowment assurance, taken out at the undermentioned ages and maturing at sixty.

Sum assured £1000, payable, in the event of death, before attaining age sixty.

Estimated Results at the end of the Term.

Age next birthday.	Number of payments.	Annual premium.	Total premiums paid.	Total cash payments at age 60, including bonus.	Or free paid up policy of	Or an annuity for life of
		£ s. d.	£ s. d.	£ s. d.	£	£
25	35	25 9 2	891 0 10	1525 0 0	2130	140
35	25	38 0 0	950 0 0	1312 10 0	1880	120
45	15	66 7 6	995 12 6	1150 0 0	1650	100

Policies are, after three years, non-forfeitable, each annual premium paid securing a proportionate part of the sum assured without any further premiums to pay, or the policy may be surrendered for the equivalent cash value.

3. Liberal conditions, rendering the policy practically world-wide and indisputable from the commencement.

4. Claims paid immediately on proof of death and title.

THE METROPOLITAN LIFE ASSURANCE SOCIETY,

3, Princes-street, Bank, E.C.

Established in 1835 for mutual assurance.

The principles upon which the business of the Society is carried on are distinctive in many respects. It employs no agents, and therefore pays no commission; it has no share holders, and therefore pays no dividends—the saving thus effected being returned by way of bonus to the members. The entire expenses of management are only 4 per cent. of the income.

The method of division of the surplus, too, is peculiar, but entirely consistent with the expressed aim of the founders—namely, to provide assurance of fixed amount at the least possible outlay.

With this object the surplus funds are applied exclusively in reduction of premium, instead of in augmentation of the sums assured. The full premium is payable for five years only, and is thereafter subject to abatement according to the result of the annual valuation; only such a proportion of the nominal premium being then charged as will suffice, with the funds in hand, to provide for the sums assured at death.

The reduction of premium for the present year is 40 per cent. on all policies of the current series which have been five years or more in force. For example, a man who effected a policy for £1000 at age thirty in 1885 at an annual premium of £24 17*s.* 6*d.* is this year charged only £14 18*s.* 6*d.*, with the prospect of gradual further reduction as time goes on.

Such favourable results are the effect of economy of management and judicious selection of lives; the latter point being one of which all members of the medical profession will appreciate the importance, while the value of the former is patent to everyone.

No alteration of the published terms and conditions is made in favour either of individuals or classes, but all members share alike in the advantages of a purely coöperative society.

Participation in the profits is restricted to holders of ordinary whole-life policies, but the Society also grants endowment assurances, joint life, survivorship, and period policies, &c., at very low rates.

Finally, the office is possessed of ample funds to meet its liabilities, which are valued by the H^{m} table at 3½ per cent. interest, and its investments and accounts are submitted annually to the scrutiny of professional auditors.

MUTUAL LIFE ASSURANCE SOCIETY,

39, King-street, Cheapside.

The Mutual Life Assurance Society is a purely Mutual Office, established in 1834, with the object of securing to its members the greatest benefits to be derived from the most perfect system of life assurance. The funds amount to nearly fifteen times the annual Premium Income, and are over 41 per cent. of the total sums assured. New entrants share equally with the old in the large accumulated surplus of £464,000, according to the premiums paid, accumulated at 3 per cent. compound interest. The Society transacts all classes of life assurance business. No preference is given to any class or body of persons. Members of the medical profession are taken on the same terms as other first-class lives.

MUTUAL LIFE INSURANCE COMPANY OF NEW YORK.

Established 1843. Head Office for the United Kingdom, 17 and 18, Cornhill, London, E.C.

A man insuring his life, especially if he be a medical practitioner just starting, wants to accomplish two purposes: first, to secure the largest amount of immediate insurance

protection for his family in case of early death; secondly, if he survive his fifth or sixth decade, the policy which has thus far protected his family should, at his option, provide for his declining years.

Now, it has hitherto been impossible, under an English insurance contract, to combine these two conditions—that is to say, the endowment and life contract, which are so essential to the majority of those seeking life insurance. For, should a medical practitioner take an endowment policy, he, in case of his death, sacrifices the interests of his family; while, on the other hand, if he takes a life contract, he sacrifices what may be of equal importance—viz., provision for himself in his old age.

I am happy to be able to inform you that the Mutual Life Insurance Company of New York has embodied these two conditions in the Company's new twenty-year distribution policy. Moreover, in this new policy, which contains advantages not conferred by the endowment policy, the policy holder may take a fully paid-up participating policy for a largely increased amount, for which no further medical examination is required, payable at death to his family, should this be preferable to him, or he has the option of leaving the cash value of the policy payable at his death to his family, meanwhile drawing an annuity on the amount of such policy at the rate of 3½ per cent. per annum.

I must not trespass upon your space to set out an example in detail, but I take the liberty of enclosing a copy of our prospectus. I would only add that, assuming a man aged thirty to take out a twenty-year endowment policy for £1000, he would pay, say, £50 per annum, but if he took out one of our new twenty-year distribution policies, we would insure him for twice that amount at a premium of £62, and this policy would give him the same guarantee at the end of the period as an endowment policy, in addition to the other options above referred to. Under this contract, therefore, he secures the benefit of an extra £1000 of insurance at a cheaper rate than he would be charged for mere non-profit term insurance for the same period, and yet obtain the full benefit of the most perfect endowment policy.

I enclose a proposal form, from which you will see the extremely simple and direct character of the contract, and I would like to call your attention to the clause inserted in our policies making the policy incontestable after the second year, and payable in sterling at the London office immediately upon proof of death.

THE NATIONAL LIFE ASSURANCE SOCIETY.

This Society was established in 1830 as a Proprietary Company. Owing to the success of its operations, and the economy with which its affairs were conducted, a large fund was accumulated from the premiums, which rendered unnecessary the continuance of the guarantee afforded by the shareholders' capital, and an arrangement was made in 1848 by which the shareholders were paid off, and the Company was converted into a Mutual Society, the whole of the profits henceforth belonging to the policy holders. The policies are divided into four classes. Of these, Class A embraces those effected at participating rates of premium, prior to Jan. 1st, 1871. In this class the profits, in accordance with the Society's constitution, have been applied in reducing ratably the premiums. The rate of reduction for the five years ending with 1890 has been 87 per cent., and as the result of the valuation just completed, the directors are enabled to declare for the five years 1891-5 a reduction of 100 per cent. on the premiums. In other words, during the next five years the policy holders will have nothing to pay, and as, in the calculations by which the rate of reduction is determined, it is assumed that such reductions will continue during the currency of the policies, not merely for the period of five years during which it is declared, it may be presumed that the premiums have been finally extinguished. Class B consists of policies effected at participating rates of premium since 1870, except children's endowments, and is the one now open to new members. Class C comprises all assurances not participating in profits.

Many years ago the Society caused an inquiry to be made as to the rates of mortality prevailing among the children of the upper and middle classes, with the view of establishing a Children's Endowment Fund. This fund was set on foot after completion of the investigations, and was called Class D. Class D may therefore be looked upon as a special feature of this Society, and consists of Children's Endowments participating in profits. Among other features of the National Life Office we may mention special tables for the insurance of military and naval officers at moderate fixed rates which cover all risks of climate and service.

The attention of the medical profession may be drawn specially to the Society's tables of rates for assurances payable at death or on the attainment of specified ages. These rates will be found to be moderate, and at the same time, under the Society's method of distribution, which aims at an equitable apportionment of the surplus funds among the policy holders, it is anticipated that large bonuses will be allotted to these assurances. For persons who wish to secure a provision for old age they may be very conveniently associated with deferred annuities. For instance, a person who effects an insurance for £1000 under these tables, payable at the age of sixty, may, if he elects to do so at the time of taking out the policy, take an annuity of £98 13*s.* 4*d.* per annum for the remainder of his life, instead of the £1000, after attaining the age of sixty.

NATIONAL ASSURANCE COMPANY OF IRELAND,

3, College-green, Dublin.

In response to your invitation I send you a prospectus of the National Assurance Company of Ireland, setting out a special system of life assurance, under which 75 per cent. of the sum assured is paid on account during lifetime.

The system is, in fact, a happy combination of endowment and whole life assurance, subject to limited payments of premium, and therefore, apparently, more nearly than any other system meeting the requirements of the medical profession as expressed by the percentages of opinion given in your valuable statement.

The following is an example of the working of the system in the case of a man aged thirty.

Table A.

For an assurance of £1000 he pays £30 a year, and when he reaches the age of fifty he receives £250; at the age of fifty-five he receives a further sum of £250; at the end of another five years—i.e., at the age of sixty—the assured again receives a sum of £250, and all premiums cease, leaving the balance of £250 to be paid at death.

Table B.

Under this table the advantages will be found equal to those in Table A, the main feature of difference being the progressive reductions in the premiums payable after reaching the first specified age. A proposer, age thirty, under this table, will pay £33 yearly up to the age of fifty for an assurance of £1000; upon reaching that age he will receive £250, and the premium during the next five years will fall to £23; at the age of fifty-five he receives a further £250, and the premium falls to £14; at the age of sixty the assured receives another payment of £250, and all the premiums cease, leaving, as the case in Table A, a balance of £250 to be paid at death.

In dealing with medical men I beg to say that on all business introduced by them, whether on their own lives or the lives of others, and sent direct to the head office, we would be disposed to grant an allowance in respect of commission similar to that which we allow to our appointed agents.

NATIONAL PROVIDENT INSTITUTION,

48, Gracechurch-street, London.

Established in 1835 for the transaction of mutual life assurance, and for the granting of annuities and endowments.

Since its commencement it has issued upwards of 53,000 policies, has paid in claims upwards of £7,900,000, has declared profits amounting to £4,000,000.

Its gross annual income exceeds £500,000.

Its accumulated fund exceeds £4,400,000.

The members are exempt from any liability, the accumulated fund alone being liable.

In accordance with the principle of mutual assurance, the whole of the profit or surplus belongs to the members, and is divided amongst them.

The divisions of profit are made every five years, and the members have the option of receiving their shares in cash, or applying them to increase the amount of their assurances, or to reduce the premiums payable.

At the last valuation (in 1887) the amount of surplus or profit declared was £724,435. The amount divided was £612,899, the balance being carried forward as an additional reserve. The number of policies which participated was 23,163, and the total sum assured thereby, including previous bonus additions, was £11,020,759.

The following is a brief summary of the results of the division:—

New reductions of premium were granted, amounting to £87,819 10*s.* 1*d.* annually.

New bonus additions of £313,676 were allotted to policies, and cash balances of £26,323 were paid to the members who adopt this mode of receiving their shares of profit.

There were 548 policies in respect of which the profits apportioned were sufficient not only to extinguish the premiums, but also to provide for the payment of either cash bonuses or annuities to the policy holders, whilst in the case of many policies the original sums assured are now more than doubled by the bonus additions.

The next division will be made on November 20th, 1892, and all policies then in force will participate.

Assurances may be effected upon the assurer's own life, payable to his executors, administrators, or assigns, serving thus as a family provision, or as a security in business transactions; or upon the life of another, where the pecuniary interest in such life is expressed.

Endowment assurances, specially adapted to the requirements of those who wish to make provision for old age or against previous death, are granted upon unusually advantageous terms.

Claims are paid immediately on proof of death and title.

Advances are made on the Society's policies to the extent of their value.

Liberal surrender values are allowed.

NEW YORK LIFE INSURANCE COMPANY,

76 and 77, Cheapside, London, E.C.

Referring to your application of the 28th inst. for particulars of policies issued by the New York Insurance Company specially suited to the requirements of medical men, I beg to call attention to two of our plans, which offer not only valuable endowment features in fifteen or twenty years, but ample provision against death within either period.

First plan.—A fifteen or twenty year endowment can be secured on our non-forfeiting free tontine system, with a guarantee that if death should occur within the selected period the Company will pay not only the policy amount, but a mortuary bonus equivalent to one-half or the whole (as may be selected) of the annual premiums paid up to date of death. Should the insured survive the endowment period, he will be entitled to the policy amount in cash and the valuable tontine accumulations on his policy or any of the other benefits then provided for in the policy.

Second plan.—A fifteen or twenty year insurance bond can be secured, which guarantees that if death should occur within the selected period, and if the annual premiums paid with interest compounded at 4 per cent. per annum from date of each payment to date of death should exceed the amount of the bond, the Company will pay the difference between the amount of the bond and the said amount so computed as a mortuary bonus. Should the insured survive the selected period and the bond has been fully paid for, the Company guarantees to pay annually thereafter until the bond becomes payable by death 4 per cent. interest. on the total amount of annual premiums paid, together with such annual bonuses as may be declared. These bonds contain an endowment-option clause permitting their surrender at the end of the selected period for the cash value (including reserve and surplus) and guaranteeing that the amount of such reserve shall not be less than the amount of the bond; also an option of converting such total cash value into an annual income for life, the guaranteed minimum amount of such income being specified.

There are other attractive features secured by policies on these plans which are set forth in our prospectus.

NORTH BRITISH AND MERCANTILE INSURANCE COMPANY,

London—61, Threadneedle-street, E.C.
Edinburgh—64, Princes-street.

Some leading facts (shortly stated) regarding the North British and Mercantile Insurance Company. Established as a fire office in 1809; life office in 1823. No mutual liability between fire and life funds, which are therefore separately invested. Last valuation by Institute of Actuaries' H^m Table, and 3½ per cent. interest reckoned on for the future: Life funds now about 6¾ millions sterling. Annual average new life assurances in last quinquennial period, £885,000. New life assurances effected in 1889, £1,134,941.

The life assurance business combines the system of mutual insurance with the safety provided by a large protecting capital. At the last valuation bonus additions were declared ranging from £1 9*s.* per cent. per annum on new policies to £2 17*s.* per cent. per annum on the oldest. Bonus is given, not only on the original sum assured, but also upon any previous bonus attaching to the policy. Prospective bonus is also allowed to policies which mature between dates of division. Having shown, then, the undoubted security afforded, the wide extent of the business, and its profitable character, it remains only to notice shortly the features of the various premium tables.

Whole of life assurances, payable at death, with or without profits, at moderate rates in either case. Premiums may be either uniform throughout life or limited to a certain number of payments (avoiding all burden of payment in one's later years), or on a reduced scale for the first five years, giving the largest possible insurance at the outset.

Bonus additions are the same in amount whichever of these systems of payment be chosen. The oldest participating policies have been more than doubled by bonus additions—an important fact in a family provision. The assured, however, enjoy considerable freedom as to taking bonuses in cash or by reduction of premium &c.

Endowment assurances, payable at a fixed age or at death, if previous (old age and family provision combined), an increasingly important part of the business. Very favourable results have attended policies in this class, "with bonus," for at every settlement of claim, whether arising by death or by survival, the sum paid by the Company has much exceeded the premiums received by it. If, when the policy matures, the holder buys an annuity from the office with the proceeds, such annuity is given on specially favourable terms.

Combining two popular systems, the Company grants endowment assurances at a low premium for the first five years. Rates on application. Numerous other premium tables are in print, such as short term assurances (at especially moderate rates), survivorships, joint-life insurances, children's endowments, &c.; but the tables particularly referred to above are those chiefly chosen for the usual object of the assurance—viz., family provision.

The new business of late years in the annuity branch has exceeded that of any other British office. Immediate annuities, on one or more lives; survivorship annuities, to one life on death of another; deferred annuities, or pensions, can be secured either by one payment down or by an annual premium until age for pension.

NORTHERN ASSURANCE COMPANY,

1, Moorgate-street, E.C.

We have the pleasure to enclose a life prospectus of this Company, showing rates of premium for all the forms of

life assurance mentioned in the enclosure to your circular of the 28th ult., and also rates of premium for an ordinary whole term of life policy, where the premium is reduced during the first five years, while no debt whatever is incurred upon the policy.

With regard to the special advantages which this Company offers to medical practitioners who wish to assure their lives, we only offer those which we are prepared to grant to the general public.

PELICAN LIFE INSURANCE COMPANY,

70, Lombard-street, London, E.C.,

Was founded in 1797, and is thus the oldest Proprietary Company in the kingdom established for the purpose of transacting life insurance business only.

The Company offers most absolute security to its assured, as the shareholders' liability to make good the fulfilment of every contract is practically unlimited. Beyond this the Company offers the still more solid advantage of having very large funds in hand in proportion to the current amount insured, the funds as at 31st December, 1889, being nearly 43 per cent. of the total sums insured and bonuses.

The rates of premium will be found to be moderate when compared with those charged by other Companies. At the same time large bonus additions have been made to policies; and as the valuations have been most stringent, the last was based on the Institute of Actuaries' H^{m} Table, with 3 per cent. interest, these may be expected to be maintained. The next valuation falls to be made as at 31st December this year, and all participating policies then current will rank for a share in the profits.

The "Pelican" is prepared to issue policies payable at death, either with or without profits, the premiums to be payable either during the whole of life or for a limited number of years only, so that in old age there are no more premiums to pay, although (in the case of participating policies) the assured continue to share in the profits of the Company. The Company also issues endowment insurances, with and without profits. In the former case the bonus is distributed on the tontine principle, and large contingent additions may be anticipated.

The Company is also prepared to accept a reduced premium for the first five years (without any debt attaching to the policy) to meet the case of insurers whose incomes are progressive.

The Company's conditions are in all cases most liberal. To facilitate the insurance of the lives of medical men they are prepared to allow a commission of 10 per cent. on the first premium and 5 per cent. on renewals, where the proposal is made, and premiums are paid direct to the Head Office, and not through an agent.

It may be added that the Company is prepared to entertain loans on personal security, in sums of £300 and upwards, in connexion with life insurance. Such loans might often be helpful to a medical man in the early part of his professional career.

Forms of proposal and all further information may be obtained from the Secretary.

THE POSITIVE GOVERNMENT SECURITY LIFE ASSURANCE COMPANY, LIMITED,

25, Abchurch-lane, E.C. Founded in 1870.

Chairman, Hon. E. R. Bourke. Assets, Dec. 31st, 1889, £449,895. Claims and surrenders paid up to that date, £333,466. Bonuses added to policies, £51,796.

Leading features.—1. Investment of 80 per cent. of all premiums received in names of trustees (at present the Right Hon. Sir Richard Couch, late Chief Justice of Bengal; and William Macandrew, Esq., J.P.), forming a life assurance fund which cannot be touched by the Company or its creditors; in addition, the policy holders have the protection of a guarantee fund and of the share holders' capital, thus forming a complete security. 2. The positive note system, by which, with every premium under endowment and limited payment policies, a "positive note" is issued for a proportionate amount of the policy, payable to bearer on sight and proof of death of the assured. 3. Fixed and liberal surrender values. The minimum values amounting to 40 per cent. of the premiums paid at any time after two years' premiums have been paid; while, if the assured prefer it, he can obtain a loan of this amount at 5 per cent. interest. 4. Liberal conditions as regards residence abroad &c., free policies being given where circumstances warrant their being granted. 5. Admission of age before issue of policies. 6. Immediate payment of claims on proof of title.

Every class of life assurance policy is granted—whole-term policies, limited premiums, endowment assurances, survivorship assurances, joint-life assurances, temporary assurances, also immediate and deferred annuities. Policies (except temporary and survivorship) can be either with or without profits. The next division of profits will be made as on Dec. 31st, 1891. The rate of bonus for 1886 was at the rate of 30*s.* per £100 assured for each year in force during the past quinquennium.

Illustration of positive system: If a policy is for £1000 by twenty premiums each positive note is for £50, being one-twentieth part of £1000, being thus itself a fully paid-up policy payable to bearer, and entitled to rank for bonus whether future premiums are continued or not.

PRUDENTIAL ASSURANCE COMPANY, LIMITED,

Holborn Bars, London.

Our low rate of expenditure, taken in conjunction with the very large amount of business transacted, ensures to policy holders a remarkably good rate of bonus in the future.

I may state that we receive annually reports from all parts of the country, from 3500 medical men, amongst whom is distributed about £50,000 as fees during the year.

QUEEN INSURANCE COMPANY,

Liverpool.

In response to your circular letter dated Nov. 5th, I beg to inform you that we have not offered special terms to medical men, and I do not think we could do so, as the evidence of statistics shows that in consequence of the arduous nature of their profession their mortality experience is in excess of the average. We of course appreciate highly the valuable services rendered to assurance offices by careful examiners, but these are remunerated on what is generally allowed to be a fair scale.

This Company's "New Endowment Scheme" is especially suitable for the assurance of professional men. In addition to the usual advantage of drawing the sum assured and bonuses on reaching a fixed age, the assured then has the valuable option of converting the policy into a whole-life one for a largely increased amount. This is granted without medical examination. Other features of importance are the total absence of restrictive conditions and the provisions that prevent the policy being forfeited under any circumstances.

SAVINGS BANK DEPARTMENT,

General Post-office, London.

With reference to the printed circular, dated Oct. 28th, on the subject of "Life Assurance and the Medical Profession," I forward herewith a copy of the principal rules relating to Post-office Savings Bank life insurance, with a copy of the tables of premiums.

Medical men can insure their lives through the Post-office in the following ways:—

a. Sum assured payable at death. Premium payable in one sum, or annually throughout life, or annually till the age of sixty, or death, if death occurs before sixty is reached.

b. Sum assured payable at sixty years of age, or sooner in event of death before that age is reached. Premiums payable annually or in one sum.

c. Endowment assurance. Sum assured payable after

term of years from ten to forty years. Premiums payable in one sum.

The maximum amount for which any life can be assured is £100. There are no tables with profits, and no reduction of premium could be made.

I may add that should you require any further information I shall be glad to furnish it.

SCOTTISH AMICABLE LIFE ASSURANCE SOCIETY.

Head Office: 35, St. Vincent-place, Glasgow. London Office: 1, Threadneedle-street, E.C.

This is a purely mutual life office. It was established in 1826, and at Dec. 31st last its position was as follows:—

Total funds...	£3,101,811
Total assurances in force	£8,434,000
Annual income	360,000
Total claims paid	£4,300,000

It will be seen that, in addition to the funds required by the Institute of Actuaries Mortality Table and 3½ per cent. interest, there are additional reserves to meet contingencies. In addition, there are heavy appreciations in the values of what may be called permanent investments, for which no credit has been taken.

The rates quoted in the prospectus are for *selected* lives, any deviation from the standard of selectness necessitating an extra premium, as it is the aim of the directors to put all the members on an equal footing, making no distinction between one class and another, except by charging an extra premium, as already stated.

The mode of dividing the surplus at the periodical investigations is simple and popular. Bonuses are declared every seven years, and are payable on all policies from their commencement after being full five years in force. The bonuses are compound, so that old policy holders get more with advancing years. All the advantages of an annual bonus are obtained through provision being made for an interim bonus being paid on all policies that become claims between investigations. The rate of bonus has never been less than £1 10*s.* per cent. per annum on the sum assured, and, as this is a compound rate, the older policies are receiving more than £3 per cent. per annum.

To meet the wishes of those who desire a large immediate assurance for the smallest outlay the "minimum" system was introduced in 1853, and has met with much success. Assurances under this system depend upon the welfare of the Society, and full information regarding them will be found in the prospectus.

It will be seen from the prospectus, which will be forwarded on application, that the Society grants assurances under limited payments, and endowment assurances with and without additions, entitling holders to a proportionate amount of the assurance for each premium paid. The rates for temporary assurances and children's endowments will be found to be very moderate.

SCOTTISH EQUITABLE LIFE ASSURANCE SOCIETY,

Edinburgh.

The Scottish Equitable Life Assurance Society is a mutual office, in which the whole of the profits are divided among the members. It was established in the year 1831, and at the present time its income is £411,983, and the total funds £3,228,492. The number of policies in force on March 1st last was 18,332, insuring £10,595,178. The profits are divided every five years, and at the last division the sum of £293,877 was divided among the holders of policies amounting to £7,718,211, the amount of the new bonus additions being £486,907. The average addition to each policy was at the rate of £1 12*s.* 6*d.* per cent. per annum upon the original sum assured.

Its conditions of assurance are liberal and simple. Extremely complete non-forfeiture regulations have been adopted, so that it is now impossible for a valuable policy to be forfeited by omission to pay the premium. Claims are payable immediately upon proof of death and title.

The tables of the Society have been carefully adjusted so as to meet in the best way the requirements of different classes of persons: 1. To those who wish to insure their lives in the ordinary way, devoting a certain amount of income to the purpose, and securing thereby a policy for an amount which will steadily increase by bonus additions from time to time, the Society offers, under its ordinary whole-life policies (Table I.), the advantages of unquestionable security, moderate premiums, and early participation in profits. 2. To those who wish to secure at once the largest possible insurance for a present outlay, it offers policies without profits at very low premiums (Table VI.). 3. If there is good ground for expecting an early increase of income, a still larger insurance can be obtained by effecting a policy on the ascending scale of premiums (Tables II. and VII.), subject, however, to an increased premium after the lapse of five years. 4. To a man who wishes to combine a provision for his own old age with a provision for his family, the Society offers endowment assurances (Tables IV. and IX.) on particularly advantageous terms, the premiums being lower than usual, and the policy receiving the same bonus additions as the ordinary policies. 5. To those who wish to be relieved from payment of premiums after a certain age, the Society grants limited payment policies (Tables III. and VIII.), the premiums for which are very moderate. By taking a deferred bonus policy (Table V.), under which participation in profits does not commence until all the premiums are paid up, a larger immediate benefit is secured for the same payment.

The Society's premiums are calculated by half-years of age.

In view of the possibility that a medical man may experience an unforeseen reverse through unfortunate investments or otherwise, it is desirable that a family provision should be made by a "settlement policy," so that the sum assured may be secured for the benefit of wife and children, free from the control of creditors in the event of subsequent bankruptcy. The Society has had a form of policy prepared with very great care for this purpose.

SCOTTISH IMPERIAL INSURANCE COMPANY.

Scottish Imperial Chambers, 183, West George-street, Glasgow.

The extremely moderate premiums at which assurances at the younger ages may be effected with this office, combined with its satisfactory bonus additions, its liberal conditions of assurance, and the undoubted security afforded by its capital and funds, render it a very eligible Company for the young medical practitioner.

The directors are not disposed to give preferential advantages to members of any particular class or body.

SCOTTISH TEMPERANCE LIFE ASSURANCE COMPANY, LIMITED,

81, Renfield-street, Glasgow.

This Company, in addition to the ordinary whole life bonus policy (£2 8*s.* 6*d.**), offers assurance with deferred profits on very much the same terms (£2 1*s.* 6*d.**) as the usual without profit policies of other companies. For those who desire protection only during their early working years a table has been prepared, giving rates for assurances terminating at age sixty (£1 8*s.* 9*d.**) or other agreed upon age. If the element of investment is desired as well, the case is met by the usual endowment assurance bonus policy, payable at age sixty (£3 7*s.* 3*d.**) or other fixed age. This is recommended as the best for medical men. The premium runs only during the working years of life, and when the retiring period comes the policy is payable, and by investment becomes a source of annual income to assured.

All premiums can by arrangement be made to terminate at the end of any number of years.

Endowment assurance policies and others where the

* Rate for age 30.

premiums cease at a given age can at any time after the second year be exchanged for a free paid-up policy for the proportion of the total sum assured, represented by the proportion of total premiums paid: thus, five premiums paid out of twenty payable entitle to a free policy for five-twentieths of the sum assured; the bonuses previously declared are not forfeited by the exchange.

The Company has liberal general policy conditions and a non-forfeiture clause in its policies. In addition, and as its distinguishing features there are: (1) A section for abstainers at specially reduced rates, and (2) an arrangement by which the benefits of both life and accident assurance are combined in one policy at an addition of 4*s.* per cent. to the usual life rates.

SCOTTISH PROVIDENT INSTITUTION (MUTUAL).

Established 1837.

Head Office: 6, St. Andrew-square, Edinburgh. London Office: 17, King William-street, E.C.

Its system is distinctive, and is specially suited for the family provisions of medical men and others whose income is dependent on continuance of health. Instead of the usual alternative of a high premium entitling to share in profits, and of a lower premium excluding from any share, it offers a rate generally as low as the non-profit rates of other offices, and returns the whole profits to those (forming a full half of the members) who prove good lives—that is, to those whose premiums, with 4 per cent. compound interest, amount to the sums originally assured under their individual policies, no share being given to those by whose earlier death there is loss to the common fund.

The usual premium for £1000 (with profits) in the older mutual offices will at early and middle ages secure from the first in this institution £1200 or £1250, the difference being in effect an immediate bonus as large as can be looked for in good offices only after many years. The system thus secures the largest assurance during the period when a family is most dependent; while the equitable principle on which the surplus is divided yields large additions to the participators. At last division (1887), policies sharing a first time (with a few unimportant exceptions) received additions ranging, according to age and class, from 18 to 34 per cent. Policies, say, of £1000 which had shared before were raised to £1500, £1600, and even to £1800.

The scales by which the premiums are limited to a specified number are specially suited to medical and professional men. The premiums limited to twenty-one payments are usually only a few shillings higher than those charged elsewhere during whole of life. Endowment assurances are also effected at moderate rates. The new assurances effected have for sixteen years exceeded a million annually.

The funds, accumulated entirely from premiums, amount to £7,250,000. Their increase during last septennium was greater than in any other British office, due in large measure to systematic economy of management. The ratio of expenses to premiums over same period was under 10 per cent., an unusually low ratio even among offices transacting a moderate or small new business.

SCOTTISH WIDOWS' FUND,

9, St. Andrew-square, Edinburgh, and 28, Cornhill, London.

In the experience of the Scottish Widows' Fund the form of life assurance which best meets the requirements of members of the medical profession is that which limits payment of premiums to the period during which the assured may be supposed to remain fit for the active work of life, and provides for the payment of the sum assured and bonuses to himself at the end of that period, or to his family in the event of death taking place within the period. Such policies, as granted by the Society, also secure, in the event of inability at any time to continue payment of the premiums, either a surrender value in cash or a paid-up policy for a part of the sum assured, and bonuses in exact proportion to the premiums paid. The following table shows approximately the results as at last division of profits on Dec. 31st, 1887, under policies for £1000 effected at the age of thirty and payable at the age of sixty or earlier death. Annual premium £36 8*s.* 4*d.*

Years in force.	Sum assured and bonuses.	Surrender value in cash.	Paid-up policy with right to future profits.
	£	£	£
1	1000	14	1-30th, or 33
5	1085	112	5-30ths, or 181
10	1176	251	10-30ths, or 392
15	1274	426	15-30ths, or 637
20	1383	680	20-30ths, or 922
25	1474	997	25-30ths, or 1228
30	1578	—	—

The Scottish Widows' Fund presents every advantage which life assurance conducted under the most favourable conditions is capable of affording: a large, select, progressive, and therefore profitable business; investment of funds in the safest and most remunerative securities obtainable, and the mutual principle, under which the whole profits realised are divided among the assured themselves.

The Society's prospectus contains full explanations regarding all other features and forms of life assurance.

STANDARD LIFE ASSURANCE COMPANY,

3, George-street, Edinburgh.

In reply to your circular letter of 28th ult., inquiring what the Standard Company is doing or is prepared to do in the way of facilitating life assurance for medical men, I have to inform you that we do not see our way to give any special facilities to medical men which are not accorded to members of the other professions.

Our prospectus, however, offers several systems which, one or other of them, meet very sufficiently the requirements of medical men, the assurances being at option of the assured, either with or without participation in profits. The principal of these are:—

1. Policies payable at death: (1) Premiums payable for life; or (2) premiums for any given number of years, and then to cease; (3) a small premium for the first five years and doubling thereafter during the rest of life, called the half-premium system.

2. Policies payable at a given age, or at death if earlier. (The premiums on these policies are payable either for the whole duration of the policy, or for a shorter given number of years.)

3. Partnership policies payable at the first death of two or more lives.

In connexion with whole of life policies by uniform limited payments and endowment assurances, particular attention is directed to the Company's Secured Payment System, by which each payment from the commencement after three have been made secures a paid-up policy for a proportionate part of the whole sum assured, in the event of the assured being unable to meet further payments. This system is fully explained in the Company's prospectus.

But your reference to medical men and their requirements has suggested to us an additional table which seems adapted to meet their wants, and those of most other professional men, very specially.

These wants are described by your correspondents as being: (*a*) a small premium in the early years of assurance; (*b*) relief from the burden of premiums in declining years.

The following table, which, so far as known to us, has not hitherto been adopted by any other life office, and is

now for the first time offered by ourselves, combines these requirements, and is as follows:—

SPECIAL NEW TABLE FOR MEDICAL OR OTHER PROFESSIONAL MEN.

A.—*Annual Premiums for Assurance of each £100 at death, with profits. Premiums limited to twenty-one payments.*

Age next birthday.	Annual premium first seven years.	Annual premium second seven years.	Annual premium third seven years.
21	£2 1 6	£3 2 3	£4 3 0
25	2 4 8	3 7 0	4 9 4
30	2 9 1	3 13 8	4 18 2
35	2 13 11	4 0 11	5 7 10
40	2 19 7	4 9 5	5 19 2

Premiums ceasing thereafter.

B.—*Annual Premiums for Assurance of each £100 at age sixty, or at death if earlier. Premiums limited to twenty-one payments. With profits.*

Age next birthday.	Annual premium first seven years.	Annual premium second seven years.	Annual premium third seven years.
21	£2 8 7	£3 12 11	£4 17 2
25	2 12 11	3 19 5	5 5 10
30	2 19 1	4 8 8	5 18 2
35	3 6 3	4 19 5	6 12 6

Premiums ceasing thereafter.

Tables at lower rates without profits have also been prepared.

It may be also mentioned that the Standard has branch offices and agencies throughout India and a large number of the British colonies and dependencies, where opportunities are given to medical men and others of effecting policies, paying premiums, &c.

STAR LIFE ASSURANCE SOCIETY,

32, Moorgate-street, London, E.C.

The time you have given for a reply to your circular is too short for me to consult with my directors whether it would be to our interest to make any allowance to medical men assuring direct with us. Otherwise I would have done so.

UNIVERSITY LIFE ASSURANCE SOCIETY,

25, Pall-mall, London, S.W.

This Office is specially advantageous to those of the medical profession (of whom there must be a large number) who are eligible for membership according to the rules of the Society. All persons are eligible who have been entered at any of the Universities in the United Kingdon or at any public school having scholarships or exhibitions to the Universities. The Office was established in 1825, and from that date has maintained a high reputation for economical working, strong reserves, and high bonus-giving power. At the quinquennial valuation on May 1st, 1890, of the assets and liabilities, a reserve was made on the basis of a standard mortality table giving the strongest reserves, and on the cautious assumption that only a 3 per cent. rate of interest can be earned on investments in the future. Over and beyond this a large sum (over £90,000) was put aside for the purpose of maintaining in the future the high rate of bonus of the Office. The security, therefore, is practically absolute. The premiums on the with-profit scale are moderate, taking into account the high rate of bonus. On the without-profit scale and specially reduced premium scale they are very low indeed.

If the assurances of members of the medical profession are effected through a committee to whom we may look as agents, the Society would allow the usual commission to be deducted from the premiums remitted by such agents, and the benefit of this could be allowed by the committee to the parties assured.

The commission allowed is as follows: On ordinary whole life and endowment assurance policies, with and without profits, 10 per cent. on the premiums for the first year, and 5 per cent. on subsequent premiums; or, for the first year, £1 for each £100 assured, and for subsequent years, 2½ per cent. upon the premiums received. In the case of policies on the specially reduced premium scale, with profits, the same rate will be paid, with the exception that in lieu of £1 for the first year, 16*s.* will be paid for each £100 assured.

The most marked feature of the Society is its high bonus-giving power. The Office is strictly limited to persons eligible as above stated, and it has been found by sixty-five years' experience that the mortality of this class is lower than that of the mixed class assured in other offices. The assured benefit by this in the very large bonuses declared, which, from the foundation of the Society, have averaged over 2 per cent. per annum, and on three occasions, including the division this year, the rate of £2 10*s.* per £100 assured for each year in force since the previous division.

The Society grants deferred annuities, commencing at ages fifty, fifty-five, sixty, &c., at very moderate premiums; the premium to be returned in case of death or surrender before reaching the deferred age, with compound interest at the rate of 2½ per cent. per annum. All premiums may be made either yearly, half-yearly, or quarterly. The conditions of assurance as to non-forfeiture, foreign travel and residence, suicide, &c., are extremely liberal.

Claims are payable immediately on proof of death and title, and no claim has ever been disputed by the Society.

ACCIDENT INSURANCE OFFICES.

LONDON GUARANTEE AND ACCIDENT COMPANY, LIMITED,

10, Moorgate-street, London, E.C.

The above Company was established in 1869 for insurance against accidents and fidelity guarantees.

Its career has been steadily progressive and prosperous. Every new feature of value to the public has been engrafted on to its system of insurance, and it now claims to hold among kindred institutions a leading position in public estimation. The interests of the assured have throughout been a main object of study with the directors; the most liberal construction is placed on the liability of the Company when claims arise, and year by year such additions are made to reserves as to secure the due discharge of its obligations.

The premium income of the Company now exceeds £50,000 per annum, and, in addition to the subscribed capital of £115,000 and an ample provision for current risks, there is a reserve fund of £63,000.

NORWICH AND LONDON ACCIDENT INSURANCE ASSOCIATION.

Chief Office, Norwich; London Office, 30, Moorgate-street, E.C.

This Association is one of the oldest and wealthiest companies for effecting insurances against accidents, having been established in 1856 with a subscribed capital of £200,000, of which £100,000 has been paid up, in addition to which there are accumulated funds of over £80,000. Compensation amounting to upwards of half-a-million pounds has been paid to persons of various callings in life for accidents arising from almost every conceivable cause. The members of the medical profession appear, however, to be exceptionally liable to accidents, owing to the dangers arising from the constant necessity for riding or driving in the streets and roads, to which the carelessness of others contributes in no slight degree. They are also exposed to the terrible consequences resulting from blood poisoning, which are too well known to need recapitulation.

Members of the profession can obtain a policy covering the following advantages for an annual premium of £4. £1000 in case of death from an accident; £1000 in case of permanent total disablement from the total and irrecoverable loss of the sight of both eyes, loss of both feet or both hands, loss of one foot and one hand; £500 in case of permanent partial disablement from the total and irrecoverable

loss of the sight of one eye, loss of one foot or one hand; £6 per week in case of temporary total disablement; £1 10*s.* per week in case of temporary partial disablement; and are entitled to a bonus of 10 per cent. after the policy has been running for five consecutive years.

OCEAN ACCIDENT AND GUARANTEE CORPORATION, LIMITED,

Mansion-house-buildings, London, E.C.

Our experience proves that, while all classes of the community are daily and hourly liable to accidents of more or less severity, and from causes over which they have no control, medical men are more liable to accidents than those following other professions. As a proof of this we have at the present time on our claim registers a medical man who, while attending a female patient, scratched his finger; blood poisoning ensued, and for some time his life hung in the balance. This is an accident to which members of the medical profession are peculiarly liable, and our claim registers contain numerous such entries. Medical men in both town and country necessarily have to drive and ride a good deal, which is a very prolific cause of accident. As a rule, a severe accident to a medical man means a very considerable pecuniary loss, as a locum tenens has to be provided; besides which, there are all the

DIGEST OF EXTRACTS FROM PROSPECTUSES RECEIVED.

THE following Table gives in a digested form some of the leading features of the prospectuses of Life Assurance Offices which have been forwarded to us.

The premium rate quoted in the second column is intended to give a rough indication of the comparative rates of premium charged by the various Offices, a rate being for this purpose chosen which represents a definite sum assured, not liable to be varied by bonus additions.

The third and fourth columns intimate whether the several Offices publish Tables for Endowment Assurance Policies, and, if so, whether these quotations are made for participating or only for non-participating assurances.

The fifth column exhibits the choice which the Companies afford under their Tables of Rates for Policies under which premiums are payable only for limited terms of years, the policies becoming thereafter fully paid up.

The sixth column shows similarly the choice which the Offices afford in the matter of temporary assurances.

The last column indicates whether any provision is made for the issue of policies at reduced premium rates in their early years, an arrangement by which a comparatively large amount of assurance can be carried for what is at first a moderate premium outlay.

NAME OF OFFICE.	WHOLE TERM without profits. Rate at age 30 for £100.	ENDOWMENT ASSURANCE.		LIMITED PREMIUMS. Terms.	TEMPORARY ASSURANCES. Terms.	REDUCED PREMIUMS at Starting Periods.
		Non-participating.	Participating.			
	£ s. d.					
Abstainers' and General	not quoted	not quoted	yes	not quoted	not quoted	not quoted
Alliance	2 1 8	yes	yes	5, 10, 15, 20	1, 3, 5, 7	not quoted
Atlas	2 1 5	yes	yes	5, 10, 15, 20	1, 3, 5, 7	not quoted
British Equitable	2 5 4	yes	yes	5, 10, 15, 20	not quoted	not quoted
City of Glasgow	2 1 0	yes	yes	5, 10, 15, 20, 25, 30	1, 3, 5, 7, 10	not quoted
Clergy Mutual	not quoted	not quoted	not quoted	5, 10, 15, 20	1, 7, 14	not quoted
Clerical, Medical, and General	2 2 0	yes	yes	10, 15, 20	1, 7, 14	not quoted
Colonial Mutual	not quoted	not quoted	yes	10, 15, 20	not quoted	not quoted
Eagle	2 3 2	yes	yes	5, 10, 15, 20	1, 7	yes
Economic	1 19 9	yes	yes	5, 10, 15, 20	1, 5, 7	yes
Edinburgh	2 1 9	yes	yes	5, 10, 15, 20, 25	1, 3, 5, 7, 10	yes
English and Scottish Law	2 0 8	yes	yes	10, 15, 20, 25, 30	1, 3, 5, 7	not quoted
Equitable	not quoted	not quoted	not quoted	not quoted	not quoted	not quoted
Equity and Law	2 2 9	yes	yes	10, 15, 20	1, 3, 7	yes
Friends' Provident	not quoted	not quoted	yes	not quoted	not quoted	not quoted
Hand-in-Hand	not quoted	yes	yes	not quoted	1, 7	not quoted
Imperial	2 1 2	yes	not quoted	1, 5, 11, 16, 21	1, 3, 5, 7	yes
Lancashire	2 2 6	yes	yes	10, 15, 20	not quoted	yes
Law	2 1 10	yes	yes	5, 10, 15, 20	1, 3, 5, 7	yes
Law Union	2 0 6	yes	yes	10, 15, 20, 25, 30	1, 3, 5, 7, 10	not quoted
Legal and General	2 2 0	yes	yes	10, 15, 20, 25	1, 3, 7	yes
Life Association of Scotland	2 1 4	yes	yes	10, 20, 30	1, 3, 5, 7	yes
Liverpool and London and Globe	2 1 8	yes	yes	1, 5, 10, 15, 20	not quoted	yes
London Assurance Corporation	2 3 1	yes	yes	10, 20, 25, 30	1, 3, 7, 10	not quoted
London and Lancashire	2 2 11	not quoted	yes	10, 15, 20, 25	1, 7	not quoted
Mutual	2 1 2	yes	yes	5, 10, 15, 20, 25, 30	1, 7	yes
Mutual of New York	1 17 3	not quoted	yes	5, 10, 15, 20	5, 10, 15, 20	not quoted
National of Ireland	2 1 4	yes	not quoted	5, 10, 15, 20	not quoted	not quoted
National Provident	not quoted	not quoted	yes	10, 15, 20	not quoted	yes
New York	not quoted	not quoted	yes	5, 10, 15, 20	not quoted	not quoted
North British and Mercantile	2 3 0	yes	yes	10, 15, 20, 25, 30	1, 3, 5, 7, 10	not quoted
Northern	2 2 3	yes	yes	10, 15, 20	1, 5, 7	yes
Pelican	2 3 6	yes	not quoted	5, 10, 15, 20	1, 3, 5, 7	yes
Positive	2 2 11	not quoted	yes	5, 10, 15, 20, 25, 30	1, 3, 5, 7, 10	not quoted
Post Office Savings Bank	2 6 0	not quoted	not quoted	not quoted	not quoted	not quoted
Prudential	2 4 7	yes	yes	5, 10, 15, 20	1, 7	not quoted
Royal Exchange	2 1 5	yes	yes	5, 10, 20, 30	1, 3, 5, 7	yes
Scottish Amicable	2 2 7	yes	yes	5, 10, 15, 20	1, 3, 5, 7	not quoted
Scottish Equitable	2 0 9	yes	yes	1, 10, 15, 20, 25, 30	1, 3, 5, 7, 10	yes
Scottish Imperial	2 1 4	yes	yes	3, 7, 10, 15	1, 7	yes
Scottish Widows'	2 2 0	yes	yes	5, 10, 15, 20	—	yes
Standard	2 2 11	yes	yes	10, 15, 20, 30	1, 5, 7 5, 10, 15	See Special Table
Star	2 2 11	yes	yes	5, 10, 15, 20, 25	1, 7	yes

attendant expenses. Life insurance will not meet these, they can only be met by a policy in an insurance company, such as the Ocean.

Although medical men run a very considerable risk of accident, no extra premium is charged them, and by paying an annual premium of £2 10*s.* a policy is secured, giving £1000 in the event of death, £1000 in the event of loss of two limbs or the sight of both eyes, and £500 in the event of loss of one limb and the sight of one eye, and £5 a week for a period not exceeding twenty-six weeks during total disablement. For an additional premium of 20*s.* per annum, 25*s.* per week is given during temporary partial disablement, or £6 and 30*s.*, instead of £5 or 25*s.*, can be secured.

If desired, the Ocean Company accepts the premium by half-yearly payments.

RAILWAY PASSENGERS' ASSURANCE OFFICE,

64, Cornhill, E.C.

Accident Insurance appeals most strongly to the profession, inasmuch as it not only provides a sum in case of accidental death, but also an allowance during incapacity due to accident. It is obvious that professional risks are considerable, to say nothing of those dangers due to riding and driving, to which all medical men are exposed. To provide against all accidents there are several Companies, among which may be named the Railway Passengers' Assurance Company, the oldest and largest of the kind, with ample funds, a large reserve, and a good reputation.

This Company places the most liberal construction upon its policies, and medical men are eligible for full benefits at the very lowest—i.e., the first or ordinary class—rate of premium. A bonus of 10 per cent. is allowed after five years' insurance, and policies are issued for sums from £100 to £1000. Provision for loss of sight or limb is among the latest concessions and advantages offered by this Company.

SICKNESS AND ACCIDENT ASSURANCE ASSOCIATION, LIMITED.

Head Office, Edinburgh; London Office, 1, Archer-street West, King William-street, E.C.

While life insurance possesses numberless and obvious advantages for a medical man, another form of insurance originated some few years ago by the Sickness and Accident Association, Limited (Edinburgh), deserves more than passing mention. Its object is to provide professional men with a weekly income during incapacity through either sickness or accident, and along with these benefits is a contingent provision for old age. The system which has been worked out by competent actuaries is strikingly original, and admirably adapted for the object sought to be accomplished.

It is divided into two branches—viz., sickness and accident combined, and sickness alone, the latter, of course, being the cheaper in point of premium, as no accident risk is covered. Each department is subdivided into two branches—Temporary and Permanent,—and in each branch the assurer has the option of choosing a bonus or non-bonus table.

Those insuring under the bonus tables participate in the profits which are allocated every fifth year, but will only become payable after the age of sixty-five (at which age all premiums and sickness allowances cease), when they will take the form of an annuity. Those insuring under the non-bonus tables cease to have any interest in the Association after the age of sixty-five, and until that age is reached they form a sort of guarantee that the bonus which is calculated upon under the other tables will be realised.

The benefits in the Temporary Branch are: Six weeks' full pay, six weeks' half-pay, and one-third for fourteen weeks, making twenty-six weeks' benefit in any one year, or during any one illness. In the Permanent Branch compensation is paid in full for thirteen weeks, half for thirteen weeks, and one-third during the remainder of the incapacity, of whatever duration, up to the age of sixty-five. The premiums are calculated upon the age of the person seeking to insure, and according to the risks. The following will convey an idea of the annual cost, taking as a basis, say, £5 per week, and the age of thirty next birthday:—

Sickness and accident, combined with bonus: Temporary Branch, £8 5*s.*; Permanent Branch, £11.

Same department, without bonus: Temporary Branch, £7 8*s.* 4*d.*; Permanent Branch, £9 6*s.* 8*d.*

Sickness alone, with bonus: Temporary Branch, £6 17*s.* 6*d.*; Permanent Branch, £9 3*s.* 4*d.*

Same department, without bonus: Temporary Branch, £6 0*s.* 10*d.*; Permanent Branch, £7 10*s.*

The Association has already an extensive and growing connexion amongst the medical faculty, and no one is in a better position to judge of the value of such a provision as this than the medical man whose income is so soon and seriously affected, and his expenses greatly increased by inability to attend to his professional duties.

Several applications having been made to us by various life offices for advertisement space in this number, it seems desirable that we should explain that we have felt it necessary to close our columns on this occasion to all advertisements of that character, in order that no particular office may receive more conspicuous notice than any other.

List of Offices which either pay no commission on premiums, or offer the benefit of the commission to a medical practitioner effecting a policy without the intervention of a commission-paid agent:—

BRITISH EQUITABLE will pay commission.
CLERGY MUTUAL pays no commission.
EQUITABLE SOCIETY pays no commission.
HAND-IN-HAND will pay commission.
METROPOLITAN pays no commission.
NATIONAL of Ireland will pay commission.
PELICAN will pay commission.
UNIVERSITY will pay commission.